


FEBRUARY 14, 1955

How Big Should Inventory Be? . . . p. 39

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(For further information, see pages 18-19)

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February 14, 1955

Vol. 138, No. 7

Week at a Glance

Freight car ownership's decline is a consequence of government policies that keep the railroads from getting more business, AAR President Faricy told a TAA panel.

7

Will air-line subsidies go on forever? If not, what factors will determine when this "infant" industry is rated mature enough to rustle up its own groceries? These questions were put before shippers of the Southwest by T&P President Vollmer.

8

FORUM—Incentive pricing by carriers, giving recognition to the inherent advantages of each mode of transportation, properly requires weighing the factors applying to specific situations, and is not adapted to across-the-board application under the direction of regulatory authorities.

33

Unusual bridge-building techniques were employed when the C&O took a kink out of its line along the James river in Virginia.

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The GN cuts head-end costs in the Pacific Northwest by using collapsible containers and fork trucks to save train time and reduce car set-outs.

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Diesels for Alaska's White Pass & Yukon line have to perform efficiently on steep grades and sharp curves under extremely low temperatures.

38

How big should inventory be? Too much stock ties up capital and too little stock runs up costs. There is a way to apply a formula to arrive at a compromise between these two extremes.

39

An all-purpose passenger car, with coach seats, a Pullman lounge section and lunch counter service, is saving the C&O \$50,000 a year on a lightly patronized connecting line.

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
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Current Statistics

Operating revenues, twelve months	
1954	\$9,370,905,784
1953	10,664,264,383
Operating expenses, twelve months	
1954	\$7,384,226,784
1953	8,135,346,686
Taxes, twelve months	
1954	\$ 861,147,306
1953	1,185,017,865
Net railway operating income, twelve months	
1954	\$ 874,505,486
1953	1,109,350,754
Net income, estimated, twelve months	
1954	\$ 666,000,000
1953	868,000,000
Average price railroad stocks	
February 8, 1955	85.61
February 9, 1954	62.29
Carloadings, revenue freight	
Four weeks, 1955	2,524,775
Four weeks, 1954	2,489,506
Average daily freight car surplus	
Wk. ended February 5, 1955	51,320
Wk. ended February 6, 1954	104,682
Average daily freight car shortage	
Wk. ended February 5, 1955	392
Wk. ended February 6, 1954	566
Freight cars on order	
January 1, 1955	15,317
January 1, 1954	29,950
Freight cars delivered	
December 1954	2,173
December 1953	4,456

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Week at a glance CONTINUED

BRIEFS

Equalization of rates in most of Canada will begin to go into effect March 1 where class rates apply, as reported in *Railway Age* a year ago (March 15, 1954, page 9). Rates in those provinces east of Quebec are not affected by the equalization measure.

Traditional differentials in rates — should they and can they be maintained? That's the subject of the essay prize contest sponsored by Monon President Warren Brown and this paper. Your discussion of this question could win you \$500. See the January 17 issue, page 15, for details.

Guaranteed annual wages will be sought this year by six railroad shop craft brotherhoods, if the program proposed by a council of their respective presidents is adopted by their convention in Chicago in April.

Rumor that the Minneapolis & St. Louis is interested in acquiring the Toledo, Peoria & Western is pretty well founded, a reliable informant tells us. More news should be forthcoming on this sometime after the first of March and the TP&W's determination to acquire the Illinois Terminal would make it seem at least remotely possible that a true "Minneapolis & St. Louis" system could be formed. All three roads connect at Peoria, Ill.

Two lightweight trains have been ordered by the New Haven, Patrick B. McGinnis, president of the road, said last week. The manufacturer of the trains was not named, but Mr. McGinnis added that the new equipment would be in operation by the fourth quarter of 1955.

The Post Office Department didn't like a recent report by a Senate committee staff member, which blew higher than a kite the department's claims of financial "savings" obtained by diverting mail from railroads to air lines or trucks. The report has been put under wraps, and its author is no longer on the committee's staff.



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Transport Report Not Ready

President said it has been going back and forth among interested agencies—He couldn't predict its ultimate destiny

President Eisenhower said last week that the material submitted by his Cabinet Committee on Transport Policy and Organization was not ready for publication, and that he couldn't predict its eventual destiny.

The President was asked at his February 9 news conference if the committee's report would be made public soon. The questioner prefaced his inquiry with a statement to the effect that the report was on the President's desk.

The President's reply was that the material submitted by the committee was not yet on his desk. He added that he did not know whether the material was a report. He preferred to call it a study.

He went on to say that the study had been going back and forth among interested federal agencies which have been going at it a long time. It was not ready for publication—at the moment at least, the President continued. As to its eventual destiny, President Eisenhower explained that he had forgotten the details.

Before the President made these statements, there had been rumors to the effect that the Cabinet Committee's recommendations or Presidential transport message based on them would go to Congress last week. Meanwhile, the President's highway message, which was originally scheduled for January 27, had not been sent to Capitol Hill.

er's advisory committee on transportation, Mr. Faricy placed the blame for declining freight-car ownership on "government policies" which have kept railroads from getting enough business to justify owning more cars.

"The situation emphasizes the need for revised public policy in transportation—a policy which would put all forms of transport on an equal basis and give greater play to the forces of competition," Mr. Faricy declared.

The AAR president was a member of the 12-man panel set up to discuss the so-called Weeks' Report. The White House did not release the report prior to the meeting, however, and panel members took the occasion to advise the commerce secretary what they would like to see in the final report.

To the objection that railroads would engage in selective rate cutting, Mr. Faricy said the roads "have long been on the receiving end" of such practices. He said they now ask that the "relative rigidity of rate adjustments" be eased and declared that it would be neither unreasonable nor monopolistic to do so. "It's just common sense," he said.

ATA View — John V. Lawrence, managing director of the American Trucking Associations and also a member of the panel, took a different view. He said ATA feels that no "major overhaul" of regulation is needed, and that more effective enforcement of present law will do the job.

Mr. Lawrence said if the rule of rate making is changed, railroads will "open wide the door to engage in destructive general rate-cutting." He also opposed giving rail carriers the right to enter the trucking business because, he said, they would use their "vast financial resources" to kill off all independent competition.

Another member of the TAA panel, Lee J. Quasey, chairman of the National Agricultural Cooperative Transportation Committee, suggested the time has come to consider regulation "across the board," including railroad operating problems. He called for a "reappraisal" of the railroad labor situation.

"It would be well," he said, "for railroad management and labor to turn attention jointly to reconciling their views in a constructive way. They should consider those things which have the best prospect of success." Among these, Mr. Quasey added, are such things as government competition, abandonment of unprofitable services and improvement in regulatory practices.

Lowe P. Siddons, president of the National Industrial Traffic League, commented on the drop in railroad revenue ton-miles since 1938 and declared that



TRANSPORTATION NEEDS were aired by a 12-man panel in Chicago February 2. The panel, sponsored by the Transportation Association of

America, was moderated by TAA President George P. Baker (standing). AAR President Faricy (right), was a panel member.

Roads Seek Freedom on Rates

Faricy calls for "re-definition" of regulation to give public benefit of inherent advantages

Freedom to make rates to meet competition, subject only to the requirement that such rates cover out-of-pocket costs with something left over as a contribution to overhead, is one step the government should take in revising public policy on transportation.

AAR President William T. Faricy selected this point for major emphasis during a panel discussion sponsored by the Transportation Association of America in Chicago February 2. In the presence of Secretary of Commerce Weeks, who heads President Eisenhower's

"anyone in this room recognizes that if you lose that much business you are in trouble." Mr. Siddons, who lives in Colorado Springs, Colo., said the West "depends on railroads for transportation," and he suggested that under present-day conditions "it is time for the ICC to relax its interpretation of the Interstate Commerce Act, and let railroads operate trucks to compete for business."

House Committee Study Of Transport Proposed

The suggestion that the House Committee on Interstate and Foreign Commerce might find it desirable to undertake a comprehensive study of current transport problems was made last week.

The suggestion came from Representative Dolliver, Republican of Iowa, a member of the committee, and it was endorsed by Chairman Mitchell of the Interstate Commerce Commission. Mr. Mitchell and other members of the commission were making presentations at a hearing which the committee held to learn about the commission's work and problems.

Replying to a question from Mr. Dolliver, Chairman Mitchell said he would be in favor of such a study—or "review," as Mr. Dolliver put it. The congressman also questioned the commission chairman as to the latter's views about "antiquated regulation."

Mr. Mitchell said his theory is that the common carriers "are confronted with a very serious situation." As to the railroads, he mentioned large eastern lines which make very small profits, and those only by curtailing maintenance work. Emphasizing that he was expressing his individual views, Chairman Mitchell also said:

"The common carriers must not be limited by regulation which affects their ability to compete with each other, with contract carriers, private carriers, and exempt carriers."

Are Air Line Subsidies to Be Perpetual, Asks Vollmer

Assuming that taxpayers were justified in subsidizing commercial air lines during the industry's early days, should that policy exist in perpetuity? This question was put to the recent Corpus Christi, Tex., meeting of the Southwest Shippers Advisory Board by W. G. Vollmer, president of the Texas & Pacific.

If the answer is no, Mr. Vollmer continued, "when will the subsidies be withdrawn and the commercial air lines be required to own and maintain all of the facilities and services used exclusively in the conduct of their operations? Will it be when the gross annual revenues of the commercial air line industry have risen to three or five or ten billion dollars?"

The T&P chief executive suggested

that the principles of free enterprise be adhered to throughout the transportation industry and that each mode of transport assume the responsibility of "providing, maintaining and paying taxes" on facilities it uses in performing carrier services. "Services rendered the nation by each mode of commercial transport, without benefit of subsidy in any form, should be the measure by which each justifies its existence."

Impact Recorders — "More constructive" use of impact recorders was requested by the meeting, which asked carriers to broaden their damage prevention efforts not only by use of recorders, but also by greater use of shock absorbing draft gears and other equipment specifically designed to reduce impact damage.

Cattle shippers were warned they are taking unfair advantage of railroads' generosity. W. T. Long, Jr., T&P general superintendent of transportation and chairman of the board's Railroad Contact Committee, reminded cattlemen of assistance they had received from

railroads in the form of feed which was moved at special low drought emergency rates.

He said it is difficult for carriers to reconcile this act of aid with the steadily declining volume of cattle traffic moving by rail.

Next meeting of the board will be at Lubbock, Tex., May 22.

ICC Postpones Ban on Trip-Leasing One Year

The Interstate Commerce Commission has postponed the effective date of its order banning trip-leasing and revenue-splitting on truck leasing operations to March 1, 1956. A commission examiner had recommended postponement of the ban until 1957 (*Railway Age*, January 3, page 6). The railroads filed exceptions to this report in which they called for the commission to make its decision in the case at once.

Figures of the Week

Net Income Down 23.3% in 1954

Declined \$202 million from previous year — December net up \$50 million — Operating income \$874.5 million

Estimated net income for 130 Class I roads after income and rentals was down by 23.3% last year as compared to 1953. The 1954 figure, according to the Bureau of Railway Economics of the Association of American Railroads, was \$666,000,000 against \$868,000,000 the year previous.

Net railway operating income, before interest and rentals, came to \$874,505,486 last year while in 1953 it was \$1,109,350,754. The rate of return for 1954 was 3.28% and the 1953 rate was 4.19%.

Estimated net income for December 1954, came to \$119 million compared with \$69 million for December 1953. December's net railway operating income amounted to \$109,108,109 as against \$77,833,463 in the last month of 1953.

Gross revenues for 1954 were \$9,370,905,784 which was a decrease of 12.1% from the 1953 figure of \$10,664,264,383. Operating expenses last year declined by 9.2% from \$8,135,346,686 to \$7,384,226,784.

The AAR also reported that 21 Class I roads failed to earn interest and rentals in 1954.

CLASS I RAILROADS—UNITED STATES TWELVE MONTHS ENDED DECEMBER 31			
	1954	1953	
Total operating revenues	\$9,370,905,784	\$10,664,264,383	
Total operating expenses	7,384,226,784	8,135,346,686	
Operating ratio—per cent	78.80	76.29	
Taxes	861,147,306	1,185,017,865	
Net railway operating income (earnings before charges)	874,505,486	1,109,350,754	
Rate of return—per cent	3.28	4.19	
Net income, after charges (estimated)	666,000,000	868,000,000	
Month of December			
Total operating revenues	798,023,255	815,347,380	
Total operating expenses	628,344,458	696,907,758	
Operating ratio—per cent	78.74	85.47	
Taxes	39,494,242	22,161,402	
Net railway operating income ..	109,108,109	77,833,463	
Estimated net income	119,000,000	69,000,000	

Freight Car Loadings

Loadings of revenue freight in the week ended February 5 totaled 640,735 cars, the Association of American Railroads announced on February 10. This was a decrease of 1,244 cars, or 0.2%, compared with the previous week; an

increase of 16,350 cars, or 2.6%, compared with the corresponding week last year; and a decrease of 49,878 cars, or 7.2%, compared with the equivalent 1953 week.

Loadings of revenue freight for the week ended January 29, totaled 641,979 cars; the summary for that week,

compiled by the Car Service Division, AAR, follows:

REVENUE FREIGHT CAR LOADINGS			
For the week ended Saturday, January 29			
District	1955	1954	1953
Eastern	111,757	112,252	125,862
Allegheny	119,490	124,073	146,192
Pocahontas	51,685	45,885	50,830
Southern	123,250	118,438	128,676
Northwestern	69,868	70,444	74,266
Central Western	111,199	103,977	112,921
Southwestern	54,730	53,124	58,695
Total Western Districts	235,797	227,545	245,882
Total All Roads	641,979	628,193	697,442
Commodities:			
Grain and grain products	45,921	44,664	46,073
Livestock	7,619	7,032	6,753
Coal	129,144	122,250	123,033
Coke	10,065	9,541	14,835
Forest products	42,765	36,919	43,998
Ore	14,404	15,732	19,530
Merchandise l.c.l.	60,855	62,762	68,891
Miscellaneous	331,206	329,293	374,329
January 29	641,979	628,193	697,442
January 22	635,653	617,213	697,515
January 15	644,940	619,871	705,017
January 8	602,203	624,229	688,110
Cumulative total 4 weeks	2,524,775	2,489,506	2,788,084

In Canada.—Carloadings for the seven-day period ended January 21 totaled 69,117 cars, compared with 70,009 cars for the previous seven-day period, according to the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada:		
January 21, 1955	69,117	31,784
January 21, 1954	64,294	28,657
Cumulative Totals		
January 21, 1955	197,908	86,948
January 21, 1954	181,896	76,994

November Accidents

The Interstate Commerce Commission has released its Bureau of Transport Economics and Statistics' preliminary summary of railroad accidents for November and last year's first 11 months. The compilation, subject to revision, follows:

Item	Month of November 1954	Month of November 1953	11 months ended with November 1954	11 months ended with November 1953
Number of train accidents*	597	681	6,840	8,328
Number of accidents resulting in casualties	38	46	426	497
Number of casualties in train, train-service and nontrain accidents:				
Trespassers:				
Killed	68	61	786	913
Injured	62	68	828	911
Passengers on trains:				
(a) In train accidents:				
Killed	1	1	5	21
Injured	43	164	433	679
(b) In train-service accidents:				
Killed	1	13	13	19
Injured	111	122	1,582	1,630
Travelers not on trains:				
Killed	1	4	6	6
Injured	78	64	739	755
Employees on duty:				
Killed	14	28	186	280
Injured	1,316	1,511	14,967	17,862
All other nontrespassers:**				
Killed	102	139	1,233	1,425
Injured	440	540	4,459	4,935
Total—All classes of persons:				
Killed	187	229	2,227	2,664
Injured	2,050	2,469	23,008	26,772

*Train accidents (mostly collisions and derailments) are distinguished from train-service accidents by the fact that the former caused damage of \$350 or more to railroad property. Only a minor part of the total accidents result in casualties to persons, as noted above.

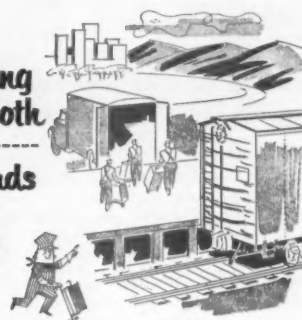
**Casualties to "Other nontrespassers" happen

chiefly at highway grade crossings. Total highway grade-crossing casualties for all classes of persons, including both trespassers and nontrespassers, were as follows:

Killed	95	125	1,126	1,332
Injured	315	426	2,976	3,345

Public Relations

Wyoming needs both Railroads AND Trucks



• Newcastle, Wyoming, knows this. Last year, railroads brought more than 1,000 carloads of oil field equipment to this booming area, plus several hundred more carloads of general freight. Motor trucks picked up shipments at the railroad freight house, delivered them where needed.

The same was true of more than 800 carloads of freight shipped from Newcastle. Much of it was brought to the railroad stations by truck for rail shipment to distant points.

Wyoming citizens benefit from this efficient train-truck teamwork. Trucks can pick up freight almost anywhere for delivery to the railroad. A freight train carries the freight quickly, and at lowest cost, to its destination on the railroad's own "steel highway."

Railroad freight shipments not only save shippers money, but relieve the highways of a heavy burden of freight traffic.

RAILROADS OF WYOMING

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CATCHY SKETCHES dress up the monthly newspaper advertisements as

Wyoming RRs Push Ad Campaign

Three western roads are sponsoring program aimed at winning new support at the "grass roots" level

An advertising campaign to carry the railroad story to every community in the state is being sponsored as an experiment by the "Railroads of Wyoming"—the Burlington, the Chicago & North Western and the Union Pacific. Since late last summer the ads have appeared monthly in newspapers throughout the state as well as in the trade publications, Wyoming Press and Cow Country.

Back of the program is the realization that if railroads are to win greater freedom in which to compete and do business, they must win more public support at the grass roots level. Thus, the test of effectiveness of the Wyoming program must come eventually in Congress and the state legislature.

While the basic idea of the campaign is to win wider public understanding, the ads also provide the railroads with a medium for answering a campaign carried on by the Wyoming Trucking Association. A recent ad by that association, for example, carried a message of how, without trucks, the growth and prosperity of Newcastle,

Wyo., "might be delayed for years." The ad told how "all" the oil well rigs operating nearby were delivered by truck, how daily necessities are delivered "almost wholly by truck," and how agriculture and other industries are "all dependent on trucks for hauling raw materials and delivering finished products."

The railroad answer, reproduced above, was in the nature of a gentle clarification. True, a great deal of freight was "delivered" by truck; but only after it arrived at, or before it departed from, Newcastle via railroad. The town is located on a main line of the Burlington.

Other railroad ads have told the people of Wyoming how wages paid to railroad employees account for 10% of the total state income, how the railroads build and maintain their own "highways" while paying \$1,500 a mile annually in taxes, and how one of every 12 Wyoming youngsters "receives an education paid for by railroad tax money."

Effectiveness of the ad campaign is currently being tested for the rail-

roads by the Wyoming Press Association. A survey of editors over the state has pointed up the "strong appeal to fairness" which the carriers are making. A specific ad on last year's drought aid (reduced rates on hay and live stock) won praise for showing that railroads "are more than fair weather friends."

Operations

RR-Truck Council Names Group to Study Piggyback

The Council of Eastern Rail and Truck Common Carriers has appointed a joint engineering committee to study the technical aspects of piggyback operations. Formation of the council, its objectives and personnel were reported in *Railway Age*, January 17, page 9. Walter J. Tuohy, president of the Chesapeake & Ohio, is chairman of the council.

The council's new committee will investigate and report on the most efficient and economical methods of unloading and loading trailers on railroad freight cars, as well as the type railroad car and trailer best adapted to the service.

Labor & Wages

C&NW Engineers Vote To Join Technical Group

In a National Mediation Board ballot box election, some 157 technical engineers on the Chicago & North Western have agreed to affiliate, for collective bargaining purposes, with the Railroad Technical Engineers, a unit within the Engineers & Scientists of America. Since 1948 the C&NW engineers had been represented by the American Railway Supervisors Association.

People in the News

ICC Secretary Laird To Retire February 28

George W. Laird, secretary of the Interstate Commerce Commission since October 1953, will retire February 28.

The retirement will close Mr. Laird's 44-year career with the commission. He entered its service in November 1910, and has served as assistant chief of the Section of Dockets, assistant to the chief examiner, and assistant

chief of the Bureau of Motor Carriers' Section of Complaints.

Mr. Laird became assistant secretary



George W. Laird

of the commission in February 1936. He served in that position until his appointment to the secretaryship.

Edwards Confirmed For New NMB Term

The Senate has confirmed President Eisenhower's reappointment of Levertt Edwards to the National Mediation Board for a new three-year term which will expire February 1, 1958. Mr. Edwards has been a member of NMB since 1950.

Competitive Transport

Railroads Seen in Highway-Mail Field

Assistant Postmaster General E. George Siedle has told the board of governors of the Regular Common Carrier Conference of the American

Trucking Associations that the Post Office does not care who owns the trucks carrying mail in its expanded highway program. It could be, he said, railroads just as well as truck companies.

Recalling the Interstate Commerce Commission decision in the Rock Island truck operations case (*Railway Age*, December 13, page 11), he said several railroads are "deep in the trucking business" and declared "we play no favorites."

Mr. Siedle, speaking at Miami January 28, advocated integration of transportation services—with through routes and joint rates—to end "the bitter struggle" now in progress.

Court Ruling Would Limit Air Mail Experimentation

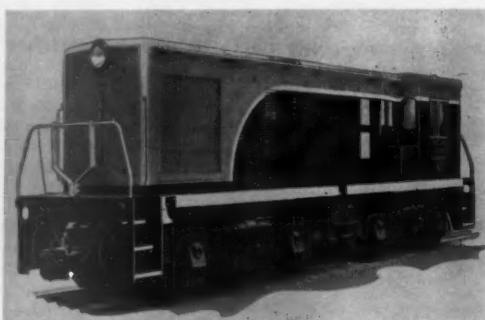
The railroads lost a battle in District Court for the District of Columbia but obtained a ruling which may take them a long way in their war against further three-cent-mail-by-air experimentation.

Federal Judge Kirkland, in denying the motion of five western roads to halt the test on the Pacific coast, struck out strongly against "prolonged experiments" which tend to "usurp the power of the legislative function."

Judge Kirkland, noting that he had only the Pacific coast experiments before him and not the 16-month-old Washington-New York-Chicago service, ruled that Postmaster General has the right to conduct experiments of this nature with the "limitation" that they "shall not be unduly prolonged."

No Irreparable Injury—He ruled in effect that the Pacific coast test, which started November 22, 1954, has not reached such a stage and denied the motion to terminate it on the grounds that the Santa Fe, Great Northern, Northern Pacific, Southern Pacific and Union Pacific had failed to show "irreparable injury." These same roads were denied a temporary injunction against the service by Federal Judge Holtzoff (*Railway Age*, December 20, 1954, page 8) on the grounds

TWO 100-TON, 500-HP 36-IN.-GAGE diesel-electric locomotives, equipped for operation under extremely dusty conditions, were delivered recently to the Inland Steel Company by the Davenport Besler Corporation, Davenport, Iowa. Overall height of the locomotives is 12 ft; overall width 7 ft, 6 in. Tractive force at 30% adhesion is 60,000 lb. at two mph. Ventilators is "100" filtered. The engine is a D-397 Caterpillar; generator and motors General Electric. The straight



air brakes are supplied with air by a Westinghouse Air Brake water-cooled compressor.

that "public convenience" required continuation of the experiment. Judge Kirkland, however, stated that "the public interest in this matter is of a greater compass than the sheer economy of money or the saving of time."

Judge Kirkland stated in his opinion that notice to Congress in Post Office Department reports that the experiments are in progress, or mention of the experiments in Senate reports does not, as the Post Office claimed in its defense, constitute Congressional approval of the tests. He further said that Congress itself must decide which is "paramount," the public's interest of savings in time and money or the issue of preserving the national transportation system.

Rails the Backbone—"The poor old lumbering freight car," he said, still is "the backbone" of this system. To cut off the "tentacles" of the system, he warned, could lead to "economic arthritis." He added that the "glamor" and "speed" of new transportation methods is attractive but said the American people "always look to the railroads" in emergencies.

A spokesman for the railroads commented that the judge's apparent opinion that the Washington-New York-Chicago experiment may have been carried on too long was being considered by all roads concerned but no future action on strength of this could be predicted. Things are in a "fluid state," he said. He questioned the finding that the western roads have not been "irreparably injured."

White Sees Competition Worried by Railroads

Railroad competitors worry about changes in transportation regulations and "view with alarm" the pending report of President Eisenhower's Cabinet Committee on Transportation, William White, president of the Delaware & Hudson, said in Newark, N.J., February 7. Mr. White spoke at a dinner honoring participants in the local community relations program of the Eastern Railroad Presidents Conference.

This worry, Mr. White said, is based on knowledge that "railroads are still the backbone of our transportation system," because no other medium of transport "can move so many tons of goods or so many people with so few men and at such low cost for fuel."

Midwest Truckers Seek Minimum Rate Order

For-hire truckers in central states territory were reported in "a precarious financial position" in a petition filed with the Interstate Commerce Commission seeking establishment of emergency minimum rates.

The Central States Motor Freight Bureau requested the ICC to investigate the "impact" of year-end wage increases and other labor costs with a view to setting this floor under motor



87-CAR CORN TRAIN recently was pulled into Los Angeles by a four-unit Southern Pacific diesel locomotive in what may have been the first cross-country move of an entire trainload of the commodity. The train, almost a mile long, was assembled at Tucumcari, N. M., by Vaulst Brothers,

members of the Los Angeles Grain Exchange. Helping display banner proclaiming the 174,000-bushel shipment are, left to right: R. E. Potter, SP freight agent; Clarence Vialst; Harold Book, Vaulst Bros. controller; W. D. Keller, SP assistant general freight agent; and Harold Vialst.

carrier rates in the territory. The bureau stated in its petition that a few motor carriers in the territory, who own little equipment of their own and do almost no less-than-truckload business, have come to "control and dominate" the rate picture there. These carriers were said to rely on owner-operators for their services and not to be troubled with wage problems.

The bureau also recalled that general rate increases had been granted by the commission within the territory in April and May of 1954. In 1938, under Ex Parte MC21, the CSMFB secured a similar minimum rate order which was suspended in 1942 and vacated as of November 1, 1943.

Traffic

1,600 NP Employees Complete Traffic Course

Nearly 1,600 Northern Pacific employees, from many different departments and offices throughout the U.S. and in four provinces of Canada, have completed the company's 18-month 40-lesson correspondence course in freight traffic (*Railway Age*, June 22, 1953, page 15).

The course was offered to all interested employees and was directed by C. W. Mottram, assistant general freight agent, and D. J. Wigstrom, special accountant. Since its inception, the NP has received requests for the lesson materials from several universities, some 300 industrial traffic managers and from railroad men in France, Peru and Japan.

A similar course in transportation, currently under way, is being sent to 2,900 enrollees. The new course will require about four months and is under supervision of E. S. Ulyatt, general superintendent of transportation.

NP to Substitute Trucks For Train-Mail Services

The Post Office Department has arranged with the Northern Pacific for operation of mail-trucking services in place of NP and Union Pacific mail-train services in the Spokane, Wash., Pendleton, Ore., and Central Idaho areas.

The highway operations, scheduled to begin about March 1, "will give improved, modernized and coordinated mail service throughout this area at reduced cost to the department," the PO announcement said. It also noted that highway post offices as well as regular trucks would be operated.

It is understood that the plan was evolved as a result of the PO's study of what might be done to improve postal transportation service in the area, where passenger-train operations had been curtailed. The survey indicated that a one-operator trucking service might be installed on a profitable basis; and the NP offered to become that operator under arrangements satisfactory to the PO.

Since the plan was announced, it has been cited as an example of how mail transportation business leaving trains for trucks might nevertheless be kept in railroad hands. Railroads need no certificates or permits as motor carriers to enter such trucking contracts with the PO.

(Continued on page 14)

They're making older



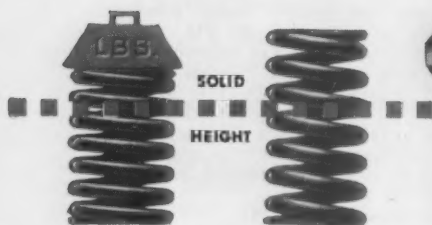
Santa Fe Reefer being brought up to modern riding standards. This car is one of thousands that have been equipped with smooth-riding ASF Ride Control Packages. Installation is simple: just jack up the bolster, pull all the old short-travel springs, slip in the Ride Control Package.

Why a small per-car investment in Ride Control Packages can pay you big returns

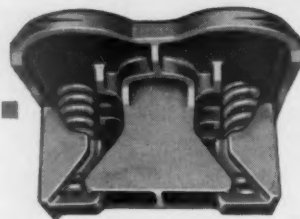
SMOOTH, SAFE RIDING AT SPEEDS TO 100 MPH

FEWER LADING DAMAGE CLAIMS

LOWER MAINTENANCE COSTS



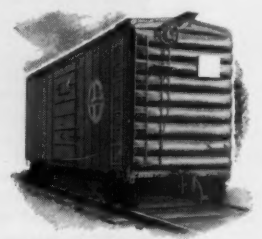
Long-travel springs . . . for soft, impact-absorbing spring action, whether the car is empty or fully loaded. Your choice of 2½" or 3" spring travel.



Constant friction control . . . prevents harmonic oscillation of springs. Induction-hardened friction surfaces keep it constant—for years of service.



The inevitable result of a smoother riding freight car is greater protection of lading—especially when running in modern speed ranges.



The car that rides smoother is the car that requires less maintenance and fewer repairs. And, even the roadbed stands up longer!

On the Santa Fe, a continuous program of modernization adds weight to the slogan, "Ship Santa Fe all the way." Here's how

cars ride better than ever!

The Santa Fe repair program offers a good example of how older freight cars can be brought up to modern riding standards—at costs which are soon written off.

During scheduled repairs, the Santa Fe has equipped 4271 reefers and 983 50-ton box cars with ASF Ride Control® Packages, the self-contained units with built-in long-travel springs, *constantly controlled* by induction-hardened friction surfaces.

Standard procedure, as cars are shopped, is to first check the condition of the trucks. If side frames and bolsters don't meet AAR standards, they are replaced with ASF Ride Control Trucks. But in the thousands of cases where trucks are up to standard, the old short-travel

spring groups are simply replaced with Ride Control Packages. Time required for the change: less than a half-hour.

Result? Cars that ride better than ever before. *Cars that cut lading claims and cost less to maintain.* In short, here's how a leading railroad is providing smoother, safer freight hauls. And, *repeat orders* for Ride Control Packages prove that the Santa Fe's modernization program is paying off.

Find out how Ride Control Packages can help you keep your older cars in first class condition—and cut lading claims as well. Your ASF Representative has facts and figures on the practicability of making *smoother riding* another objective of any general repairs program. Write us today!

"ENGINEERING IN STEEL — ENGINEERS' WEEK — FEBRUARY 20-26"

Bring your older cars up to modern riding standards




with
ASF

**RIDE-CONTROL
PACKAGES**

AMERICAN STEEL FOUNDRIES

410 N. Michigan Avenue, Chicago 11, Illinois

Look for this MINT  MARK on the running gear you specify

Canadian Sales: International Equipment Co., Ltd., Montreal 1, Quebec

Organizations

U. S. to Participate In 1956 Pan-Am Congress

The United States will participate in the ninth Pan American Railway Congress to be held at Buenos Aires, Argentina, in the spring of 1956.

This was announced January 19 by the chairman of the United States National Commission in the Congress—William T. Faricy, who is also president of the Association of American Railroads. On the previous day, the commission held a meeting in Washington to make plans concerning the role U.S. will play in the Congress.

In the latter connection, Mr. Faricy also said, the commission will recommend revisions of the charter of the Pan American Railway Congress Association. The latest Congress, the eighth, was held in this country during June 1953.

C&O Tells "Why An Electronic Computer"

One feature of the American Management Association's conference (February 28, March 1-2) on electronic data processing equipment will be the Chesapeake & Ohio's presentation, "Making a Feasibility Study" of a high-speed electronic computer. C&O speakers will be: J. E. Kusik, vice-president—finance; H. N. Laden, chief, computer systems development; William Bamert, assistant to vice-president—finance; A. F. Dell Isola, research assistant to vice-president—finance; J. F. Feagler, chief methods research officer; and E. L. Morrison, Jr., superintendent freight transportation—system. The C&O's presentation, accord-

ing to AMA, will be "a summary of the research, preparation and planning" which preceded the road's ordering of a Remington Rand Univac.

The conference also will feature other users—present or near future—of computers. Among the participating firms will be National Tube division, United States Steel Corporation; Westinghouse Electric Corporation, and E. I. du Pont de Nemours & Co. Subjects to be discussed will be electronics from top management's point of view; feasibility of computer systems; costs and problems in programming computers; actual applications of computers of different sizes, and the future of electronics as a management tool.

Admission to the conference, which will be held in New York's Statler Hotel, is \$90 for non-members.

The 41st annual dinner of the **Traffic and Transportation Association of Pittsburgh** will be held in the William Penn Hotel, at 6:30 p.m., February 24, with Fay Le Meadows, lecturer and author, as principal speaker.

B. Joe Swindall, of the Fort Worth & Denver, has been elected president, and Ross H. Dinkins, of the same road, vice-president, of the **Fort Worth Passenger club**.

The 58th regular and annual meeting of the **New England Shippers Advisory Board**, in the New Statler Hotel, Hartford, Conn., March 9-10, will be highlighted by a field demonstration of the Canadian National Plexiglass freight car and a display of historical documents relating to development of railroads and industries in Connecticut. Speaker at the March 10 business session will be Norris Ford, executive vice-president, Manufacturers Association of Connecticut; subject—"Transportation Needs of Industry." At the luncheon session on that day Wil-

liam H. Schmidt, Jr., executive editor of *Railway Age*, will discuss "Freedom—What's In It for Shippers," and Arthur H. Gass, chairman, Car Service Division, Association of American Railroads, will review the formation and growth of the New England board.

Charles H. Tuttle, chairman of the Metropolitan Rapid Transit Commission, will discuss "Planning for Rapid Transit in the Metropolitan Area" at a dinner meeting of the **New York Railroad Club** at 7 p.m., February 24, in the Hotel Commodore.

Equipment & Supplies

Freight Cars Owned Down 41,296 in 1954

Despite a loss of 41,296 freight cars owned by Class I roads last year, the daily number of surplus serviceable cars ranged from 28,000 to 140,000 according to A. H. Gass, chairman, Car Service Division, Association of American Railroads.

In his latest report on "The National Transportation Situation," Mr. Gass states that Class I roads and their car-line affiliates placed 30,562 new cars in service and retired 71,858 in 1954. The total of cars owned as of January 1, was 1,816,752 against 1,858,048 on January 1, 1954. With 119,722 cars awaiting repairs at the first of the year, Mr. Gass reported, there was a total of 1,697,030 serviceable cars owned January 1 against 1,766,629 a year ago.

He also reported "the smallest average shortage" for the past 12 years with shortages ranging from a minimum of 15 to a high of 3,664, mostly among high grade wide-door or 50-foot box cars.

Weekly carloadings for 1954 reached their peak in October when 954 ton-miles of freight moved each day for each serviceable car on line. This compares with 1,018 ton-miles per day for October 1953. The total dropped to 908 ton-miles in November, 1954, compared with a 912 figure for November, 1953.

FREIGHT CARS

The **Chicago & North Western** has ordered 226 50-ton box cars from the Pullman-Standard Car Manufacturing Company for delivery next April.

The **Chicago Great Western** has ordered ten 70-ton covered hopper cars from the Pullman-Standard Car Manufacturing Company at an estimated cost of \$92,000, and 10 caboose cars from the International Railway Car Company at an estimated cost of \$159,000. Delivery of the hopper cars is expected in March, while delivery of the caboose cars is to begin in April and be completed in June.



PUSH - BUTTON PURCHASES of single-trip tickets can now be made by New York Central suburban passengers from this self-service vending machine in Grand Central Terminal, New York. The machine, known as "Automaticket" and developed by the General Register Corporation, delivers a ticket four seconds after coins are dropped into it. It will be tested at various localities in the terminal to determine its full potentialities.

The **Delaware & Hudson** has ordered 100 70-ton covered hopper cars from the Pullman-Standard Car Manufacturing Company. Delivery is expected within four weeks.

The **Fort Dodge, Des Moines & Southern** will lease 25 special rack-end cars, for gypsum board loading, from the Chicago Freight Car & Parts Company. Delivery is scheduled to begin late in March. Design of the car follows recommendations of gypsum wallboard manufacturers. End racks are of all-welded construction. There is a special metal enclosure at the "A" end of the car for adhesive materials which form part of most gypsum board shipments. The compartment is designed to be locked while in transit. Car decks are flat and spacing of end racks is such that a minimum of blocking will be required. Special strap anchors will be positioned just inside the side sill so that lading may be tied with a near-vertical pull to reduce side sway.

The **Illinois Central** has ordered 100 70-ton covered hopper cars from the Pullman-Standard Car Manufacturing Company at an estimated cost of \$840,000. Delivery is scheduled for March.

The **Kansas City Southern** has ordered 90 70-ton covered hopper cars from the Pullman-Standard Car Manufacturing Company at an estimated unit cost of \$7,600. Delivery is expected within the next three months.

The **St. Louis Southwestern** has ordered 400 50-ton box cars from the Pullman-Standard Car Manufacturing Company at an estimated cost of \$2,540,000. Deliveries are to begin late in February and be completed in March.

The **Transportation Materiel Command** has ordered 46 50-ton box cars from the Pullman-Standard Car Manufacturing Company.

PASSENGER CARS

The **Northern Pacific** has ordered two rail diesel cars from the Budd Company. Early in March, one car, an RDC-2 carrying 70 passengers, will go into service between Spokane, Wash., and Lewiston, Ida., and the other car, a 48-passenger RDC-3, will go into service between Duluth, Minn., and Staples.

COMMUNICATIONS

CNR Experiments With Freight-Train Radio

The Canadian National is testing radio telephone communication in freight train operations between Montreal and Vancouver, 2,930 miles. The experiment, being carried out with the cooperation of Rogers Majestic Elec-

tronics, permits instant communication between front and rear train crews, the trainmen and wayside stations, and, with walkie-talkie equipment, between flagmen and other train crew members. Temporary transmitting stations have been installed at Winnipeg, Edmonton, Kamloops and Vancouver.

Supply Trade

Arthur L. Berry has been elected treasurer of **The Rail-Trailer Company**, with headquarters at Chicago. Mr. Berry, a director of the company, was formerly assistant to the president of Pullman Incorporated.

James J. Van Horn, assistant manager, Chicago district office, **Union Switch & Signal division of Westinghouse Air Brake Company**, has been appointed manager of the reactivated Pittsburgh district office, at Swissvale, Pa. **Frank M. Kenney, Jr.**, project engineer in the centralized traffic control section, has been named sales engineer, and **W. Robert Fisher**, sales engineer, also has been assigned to the Pittsburgh office. **Walter P. Quintin, Jr.**, service engineer on the CTC system for the Orinoco Mining Company's railroad in Venezuela, has been appointed sales engineer in the New York district office of US&S.

The New York sales region of **Electro-Motive Division of General Motors Corporation** has been expanded to include the Jacksonville region, and is now known as the Eastern region. **G. M. LaRiviere**, regional manager at New York, is manager of the new region. **Charles L. Moss**, Jacksonville regional manager, has become district sales manager at New York, and **B. K. Wingerter**, district sales manager at Jacksonville, has

been transferred to a similar position at Baltimore. **W. A. Stringer**, sales representative at Jacksonville, has been promoted to district sales manager there.

J. M. Yahres, president of **Pittsburgh Screw & Bolt Corp.**, has been elected chairman of the board, and **D. D. Greenshields**, president. Mr. Greenshields is now executive vice-president and director of **National Screw & Mfg. Co.**, which positions he will resign to assume his new duties with PS&B as of May 1. In the meantime Mr. Yahres will hold the office of president as well as chairman.

B. C. Graves, president of **Union Tank Car Company**, has been elected chairman of the board. **Edwin A. Locke, Jr.**, executive vice-president, succeeds Mr. Graves as president.

Gardner-Denver Company and **Keller Tool Company** have been consolidated. The latter is now the Keller Tool division of Gardner-Denver and continues under its former management. **E. V. Erickson**, president of the Keller company, has been elected executive vice-president of Gardner-Denver. **Clifford V. Leece** remaining as president of the latter.

OBITUARY

William C. Hansen, 60, president of **A. Stucki Company**, died during surgery at Johns Hopkins Hospital, Baltimore, January 27.

New Facilities

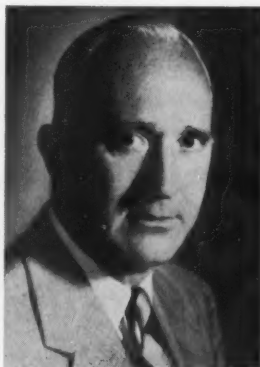
L&N Dedicates New Station At Mobile, Alabama

The Louisville & Nashville formally dedicated its new \$750,000 passenger station at Mobile, Ala., on February 8. The two-story steel and masonry structure was actually used by passenger trains beginning February 5, although some facilities—notably the city ticket office—were not scheduled to move in until February 12.

On the main floor of the new building are waiting rooms, ticket offices, a restaurant and a baggage room. The second floor contains offices for divisional operating officers.

Located on a site which the city cleared of existing buildings and deeded to the L&N in 1953 for \$41,882, the station occupies a half-block area bounded by Government, Commerce and Water streets. Title to the site of the former station has been turned over to the city.

Alabama Great Southern.—This road has applied to the ICC for authority to extend its line at Tuscaloosa,



CARL F. NORBERG, who has been elected president of **Electric Storage Battery Company**, succeeding **S. Wyman Rolph**, retired. Mr. Norberg had been executive vice-president since 1950.

Ala., 1.9 miles to provide service to the Gulf States Paper Corporation.

Canadian National.—This road will spend \$2,300,000, and the St. Lawrence Seaway Authority \$4,000,000, for approach work to handle traffic over Victoria bridge, Montreal, when the seaway project is completed in the Montreal area in 1958.

Chesapeake & Ohio.—A new bulk materials unloading facility costing \$8,307,000 will be built at Newport News, Va. Construction is to start in March and be completed in 16 months. The facility will be 711 ft long and 82 ft wide. On it will be three unloading cranes, each capable of handling 15 tons of bulk material every 45 seconds. Railroad cars will move by gravity in a continuous line through the carloading house, which will have two 600-ton-capacity elevated storage bins. Four cars will be loaded at a time.

Design of the new pier, the road said, was materially influenced by studies of ore piers made in Europe last year by M. I. Dunn, C&O vice-president—construction and maintenance; K. A. Browne, director of research; L. T. Nuckols, chief engineer; and other C&O engineering personnel.

Chicago & North Western.—Has ordered from the General Railway Signal Company equipment for installation of a traffic control system between California Jct., Iowa, and Blair, Neb., 7 miles.

Erie.—Centralized traffic control is being installed between Pershing and Aldine, Ind., 22 miles, to be completed this year. Three miles of double track will be retained near the middle of the CTC territory for use as a passing track. On the remaining 19 miles of main line (formerly double

track), one main track is to be removed. The CTC control machine is to be located at Huntington, Ind.

Erie.—Has ordered from General Railway Signal Company equipment for installation of an all-relay interlocking plant at a crossing with the Lackawanna in Binghamton, N. Y.

Louisville & Nashville.—This road has proposed to build 3.1 miles of industrial lead track, extending a spur at Vernons, Ala., toward Roberta to serve a manufacturer there.

Missouri Pacific.—This road has been authorized by the St. Louis Federal District court to spend \$8,626,610 for property improvements, including new rail and track materials. Approximately 78 miles of 132-lb rail will be installed on the main line between St. Louis and Texarkana, Ark. Fifty-two miles of new 115-lb rail will be installed at various other locations.

Walkie-talkies and transcribing equipment will be installed in the East Bottoms freight yards at Kansas City, Mo. Various wood trestles will be replaced with reinforced concrete structures, and warning devices will be installed at certain grade crossings. Some sidings will be lengthened to accommodate longer trains.

Pacific Fruit Express.—The PFE will mechanize its refrigerator car icing facilities at Laramie, Wyo., at a cost of \$465,000. Additional car capacity will be gained by extending the platform to accommodate 200 cars. Three mechanical icing machines will be mounted on the platform and equipped with radio for contact with the foreman's office. In addition, the platform will be equipped with a two-way public address system. The new icing machines will each be capable of handling

11,000 lb of ice into a refrigerator car in 90 seconds or reicing the bunkers of a car in an average of 45 seconds. The project is scheduled for completion about May 1.

About 98,000 cars were reiced at Laramie in 1954, K. V. Plummer, vice-president and general manager, revealed. He termed the mechanization of ice manufacturing there three years ago "fortunate," as subsequent winters have been too mild for natural ice harvests to have met shipping demands.

Pennsylvania.—This road will tear down its Federal Street station in Pittsburgh. The land will be used for a parking lot. Through trains have not stopped at the station for several years, and adequate facilities will be provided for commuters who use the seven suburban trains stopping at it, J. A. Appleton, PRR vice-president, said. The station was built in 1907.

Rock Island.—Contracts will be let about June 1 for construction of a new freight house at Dallas, Tex.

Southern.—Has ordered from the General Railway Signal Company equipment for installation of centralized traffic control on 70 miles of road between Flat Rock, Ky., and Oakdale, Tenn.

Western Maryland.—The WM plans to construct, during 1955, additional storage capacity of 1,229,000 bushels at its Port Covington (Baltimore) grain elevator, increasing the elevator's total capacity to over 5,000,000 bushels, and making it the largest in Baltimore. "An analysis of the needs of the grain trade of Baltimore harbor convinces us we can amortize this added capacity, which will cost about \$1,000,000, out of earnings in the five-year amortization period permitted by the income tax law," according to W. Arthur Grotz, WM president.

One of the new warehouses, 600 ft by 70 ft, which the railroad is building on the site of its former Hillen Street passenger facilities, is nearly completed, and the other will be finished by spring. The company's "modest passenger requirements" will be cared for by a small station at the edge of the property.



FIRST TRAIN ever to go through Dunellen, N. J., without crossing streets at grade was one of the Jersey Central's "Raritan Clockers," at 12:56 p.m., January 24. The train used one of two new high-level tracks completed to date in a four-track elevation

project, three miles long, which will eliminate four street crossings in Dunellen and one in Plainfield. The \$6-million job, being paid for jointly by the CNJ and the state of New Jersey, is scheduled for completion by the end of this year.

Financial

Canada Cuts Railway Grain Payments

The Canadian government has reduced from \$17,000,000 to \$15,500,000 the amount paid annually to Canadian railways for moving Prairie feed grains to Ontario, Quebec and British Columbia at substandard rates. Reduction of the grain "subsidy" does not affect amounts paid for moving freight out (Continued on page 43)

Questions and Answers FOR THE TRANSPORTATION DEPARTMENT

Must mileage be paid on empty tank cars moved for carrier's convenience?

(Repeated from October 11, 1954, column.)

Yes—if cars are moved outside switching limits.

A tariff allows an owner or lessee of private tank cars to return empty tanks, in any numbers, to loading point, there to be held for prospective loading, on carrier's tracks, free of demurrage until tendered or placed for loading. Occasionally, so many of these empty tanks arrive that carrier is required to move some to other locations or stations for storage to keep the yard fluid at loading point. Must the carrier pay the owner mileage when cars are so moved, and if so should it be included in the equalization account?

Mileage must be paid to the owner if such cars are moved to points outside switching limits of the station where they are held. Such mileage must be included in the owner's equalization account. (See Mileage Tariff 7 series, Item 105, Rule 2.)

Recently the Records Committee of the Operating-Transportation Division, Association of American Railroads, has said—with respect to inclusion of such mileage in the equalization account—that it has found that a general prac-

tice exists for handling cases of this type.

Generally, railroads eliminate such mileage from the equalization account, on the ground that it is for railroad convenience and hence in the nature of a railroad error. The Records Committee did not recommend any change in the tariff.

While opinions of the Records Committee have the effect of recommended practice, there is considerable doubt that an accumulation of empty tanks at a holding point can be considered as railroad responsibility and accordingly "railroad error." It would seem that, if it is desired to exclude such mileage from the equalization account, there should be added to Item 110, Rule 3, Note 2, Mileage Tariff series 7, the words "or for railroad convenience" following the words "railroad error," as suggested by the Eastern Association of Car Service Officers in its submission of the question to the Records Committee of the AAR.—G. C. R.

Has the loading of freight cars, in accordance with provisions of Car Service Rules, improved in the period since World War II?

Yes—especially at freighthouses.

"Comparing the first 10 months of 1954 with the similar period of 1949, the percentage of cars loaded in accordance with rules to total cars loaded, as checked by field forces of the Car Service Division, was 5.2% better where freighthouse forces did the loading, and 2.0% better when industry did the loading.

"However, the percentage of observance is not yet back to what it was prior to the war. War seems to generate a feeling that "a car is a car." It requires a definite program of education to impress upon all car handling forces that proper selection of cars for

loading in accordance with Car Service Rules is, definitely, an economy measure. The same general situation existed following World War I." — E. W. Coughlin, manager, Railroad Relations Section, Car Service Division, Association of American Railroads.

[My own experience is that in any period of serious car shortages both railroad men and shippers adopt the "car is a car" attitude. During periods of general car surpluses, of course, rules violations also run high, as railroads load their own cars off line (to gain per diem) and send foreign cars home empty.—G. C. R.]

[Since our most recent quiz on Car Service Rules (answered in the December 6, 1954, column) met with such wide response (more than 430 answers), we've decided we're going to run another.

Like the last quiz, this one will require that respondents—to get the

"preferred" answer — have some knowledge of railroad "geography." Attention will have to be paid not only to the initials of the car, but to the name of the delivering carrier. This new quiz will appear in the March 14 column. Watch for it—and send in your answer.—G.C.R.]

CONDUCTED BY G. C. RANDALL, district manager, Car Service Division (ret.), Association of American Railroads, this column runs in alternate weekly issues of this paper, and is devoted to authoritative answers to questions on transportation department matters. Questions on subjects concerning other departments

will not be considered, unless they have a direct bearing on transportation functions. Readers are invited to submit questions, and, when so inclined, letters agreeing or disagreeing with our answers. Communications should be addressed to Question and Answer Editor, Railway Age, 30 Church Street, New York 7.

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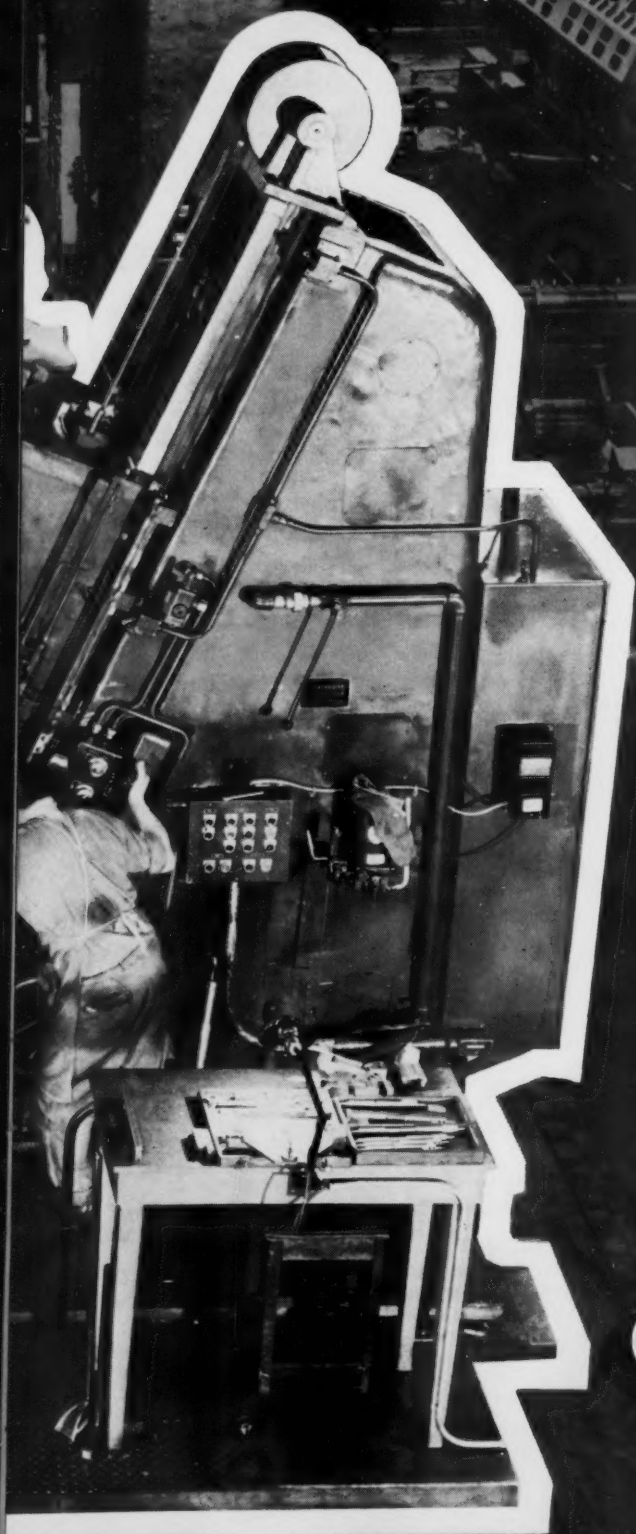
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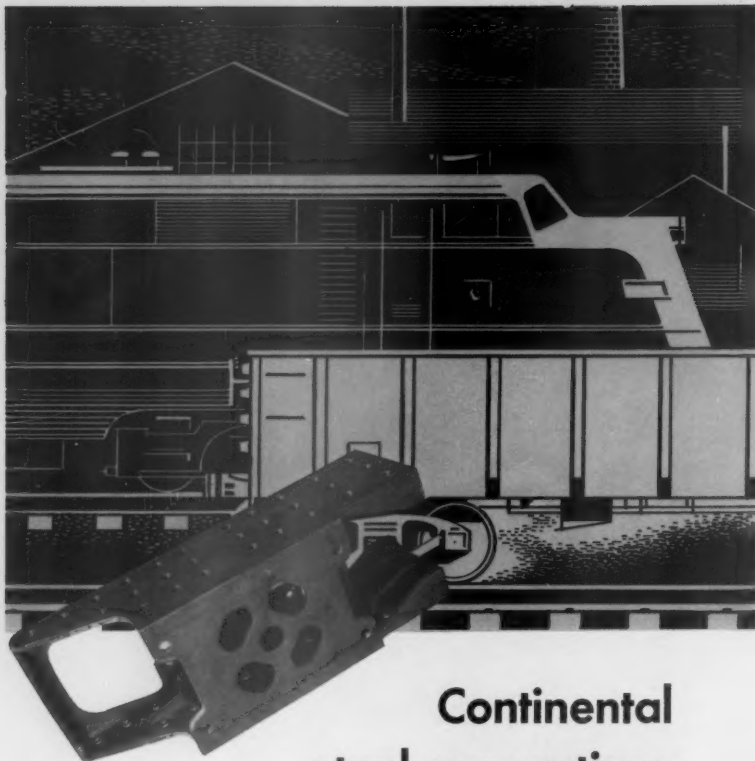
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Current Publications

BOOKS

50 YEARS ON TRACKS, prepared by Caterpillar Tractor Company. 104 pages, illustrations. \$1.25, at Caterpillar dealers or through the company's headquarters, Peoria, Ill.

Sets forth, probably for the first time, the history and development of the crawler-type tractor since the first practical model was introduced in 1904 by Caterpillar's predecessor, Holt Manufacturing Company; profusely illustrated, with many historical photos. A smaller portion of the book is devoted to present uses of the company's tractors, earth-moving equipment and diesel engines by various industries.

THE CHISHOLM TRAIL, by Wayne Gard. 296 pages, illustrations. University of Oklahoma Press, Norman, Okla. \$4.50.

A thoroughly documented history that also recreates much of the excitement and flavor of life along the historic cattle trail. The work shows how the trail spurred the Santa Fe toward Newton and Dodge City in Kansas to compete with the Kansas Pacific (now Union Pacific's Denver-Kansas City line) at Abilene; and how the Missouri-Kansas-Texas and the Texas & Pacific pushed into Texas to tap the lower reaches of the trail.

PAMPHLETS

WHAT EVERYBODY SHOULD KNOW ABOUT THE MAIL SITUATION. 6-page folder. Association of American Railroads, Transportation bldg., Washington 6, D.C. Free.

Outlines the facts involved in recent moves of the Post Office Department to divert first-class three-cent letter mail from railroad trains to airplanes and motor trucks.

FILM

MOTION PICTURES PREPARED AND DISTRIBUTED BY UNITED STATES STEEL. 19 pages. U. S. Steel Corporation, 71 Broadway, New York 6. Free.

Lists timely, educational, and entertaining motion pictures available from USS, with information on how to obtain them on free loan basis.

TRADE PUBLICATION

HOW TO OPERATE A LIFT TRUCK. 24 pages, illustrations. Hyster Company, Portland 8, Ore. Free (ask for Form 1214).

The two-color cartoon technique used in this booklet is designed for easy reading, and is packed with information about operation of a lift truck, preventive maintenance, safety and basic materials handling. Drawings for setting up an obstacle course are also included.

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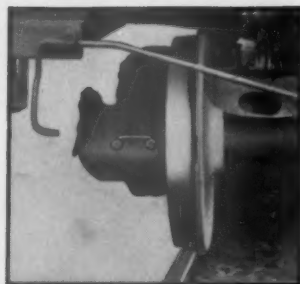
CONTINENTAL OIL COMPANY

Railway Sales Division • 400 W. Madison St., Chicago, Illinois • Lincoln 9-2666

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Here's how Magnus improve freight



100 50'-6" Frisco box cars like the above are equipped with R-S Journal Stops. Inset shows end view of truck and hex-head bolts that secure the stops. Frisco box cars, series 7000 to 7099, were equipped with R-S Journal Stops as a result of extensive tests on 9 additional cars that established improved performance and maintenance savings.



Journal box with R-S Journal Stops after flat switching impact at 11 1/2 mph. Packing is still in proper position. Compare with photos at right.

This CAN'T HAPPEN when you use R-S Journal Stops

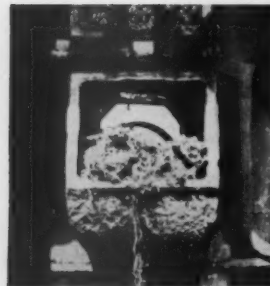
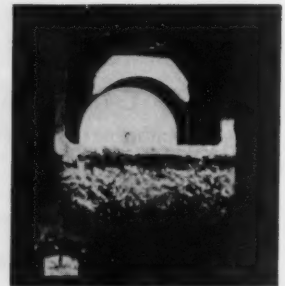


Photo of journal box at impact of 6 mph, showing how bearing is cocked off journal and packing is displaced.



When air and hand brakes are both applied, bearing and entire box are raised, compressing packing.

MAGNUS METAL CORPORATION

R-S JOURNAL STOPS

car performance

Three years service on the Frisco proves that this new development greatly reduces hot boxes, improves journal bearing lubrication, and cuts truck maintenance costs all along the line.

WITH MAGNUS R-S Journal Stops you can virtually eliminate hot boxes due to waste grabs. The bulk waste is always held firmly in position, and the bearing just can't be unseated to trap lint or short strands beneath the bearing crown. Because there's no packing displacement, oilers can service cars faster, too.

And because you hold the journal in its proper position, spread linings are prevented — and you get far longer bearing life. On the Frisco's first test car, in 38 months there hasn't been a bearing replacement — much less a hot box!

Improved Bearing Lubrication

R-S Journal Stops will make for constant bearing lubrication, too. Impacts or braking can't force the journal out of position — can't force the box to rise and compress packing. Without journal stops, whenever you have impacts or heavy brake applications, not only is the packing knocked out of position, it's squeezed against the underside of the journal. Then there's a definite loss in packing-to-journal pressures, a definite loss in lubricating ability of the packing.

But with journal stops, you avoid all that. Within given limits you maintain constant journal-packing pressures, and you supply a constant feed of oil to the bearing.

Many Other Maintenance Savings

To date all indications point to reduced and more uniform wheel flange wear when cars are equipped with

R-S Journal Stops. But that's not all. You eliminate crushed dust guards and false brake piston travel. The prospects are for reduced center pin wear and a lower mortality rate for coil springs. That's why R-S Journal Stops can be used to real advantage with pad or mechanical lubricators or packing "containers." In fact, regardless of the lubricating method, R-S Journal Stops cut maintenance costs all along the line.

Easy Installation

You can apply R-S Journal Stops to any standard freight car journal box — either separable or integral-cast type. Installation is simply a matter of drilling two holes in each side of the box, inserting and bolting stops and shimmed to proper journal clearance. Bearing and wedge can be taken out for inspection without removing the stops. To change side frames, you just remove one stop from each box.

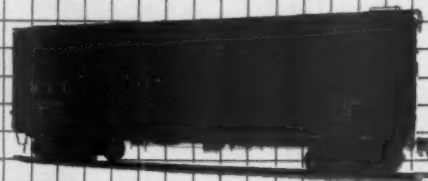
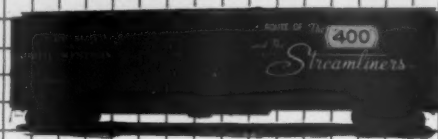
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These box cars have carried more payload

- have cost less to operate
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- have proved their ability
to outlast other construction

AT THE PRESENT TIME, more than 33,000 box cars built with USS COR-TEN Steel have been in service for ten years or longer. During that period they have thoroughly demonstrated two things. First, that the economies they make possible outweigh, by far, the slight extra cost of COR-TEN Steel construction. And, second, they have shown that reasonable weight reduction with COR-TEN Steel does not involve any reduction in stamina, life or serviceability.

These facts have not been overlooked by the railroad industry. For it is on the basis of *proved superior performance*, that those railroads which lead in ownership of COR-TEN-built equipment, have through the years added more and more of such cars to their lines.

Take the Southern Pacific for example. This railroad commenced using COR-TEN Steel in 1946. Now has 20,350 box and auto-box cars using COR-TEN in service—enough to make a train 176 miles long. Most of these cars were ordered after the original equipment had proved the merits of COR-TEN Steel construction.

The Union Pacific is another long-time user of COR-TEN Steel box cars. Since 1937 when the first order was placed, fourteen successive orders have brought the total of COR-TEN Steel box cars in U.P. service to 17,080, many of them built in their own shops.

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Also enjoying the economic benefits of COR-TEN Steel construction are the Rio Grande, the Santa Fe, the Chicago and North Western, the Lackawanna, and other leading roads which, like all operators of freight equipment, are careful to invest their dollars where they know they will get the biggest return on their money.

We can think of no better reason than this for suggesting that you too investigate the *cost-reducing and revenue-increasing* advantages of USS COR-TEN Steel construction. We will be glad to discuss this matter with you anytime at your convenience.

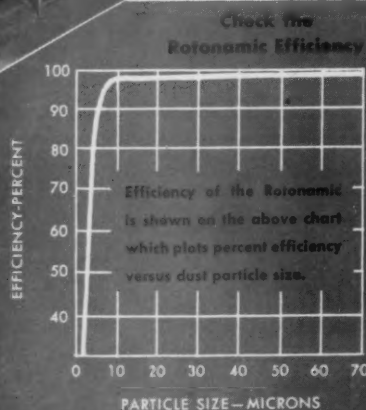
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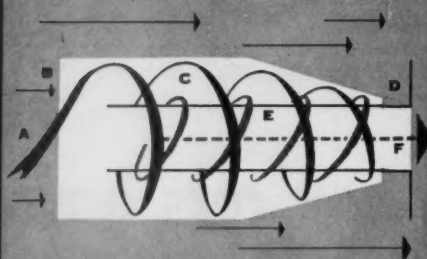
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Dust enters the inlet tube (a) and deflector vanes (b) set up a cyclonic action. While traveling along the primary chamber (c) dust particles are centrifuged towards the walls and carried into a special dust bin at (d) by the 10% -Bleed-off air. The remaining 90% of the air reverses direction, spirals back along the discharge tube (e) centrifuging the remainder of the dust. Clean, filtered air reverses direction once again and exits at (f). The dirt laden air is discharged to atmosphere.

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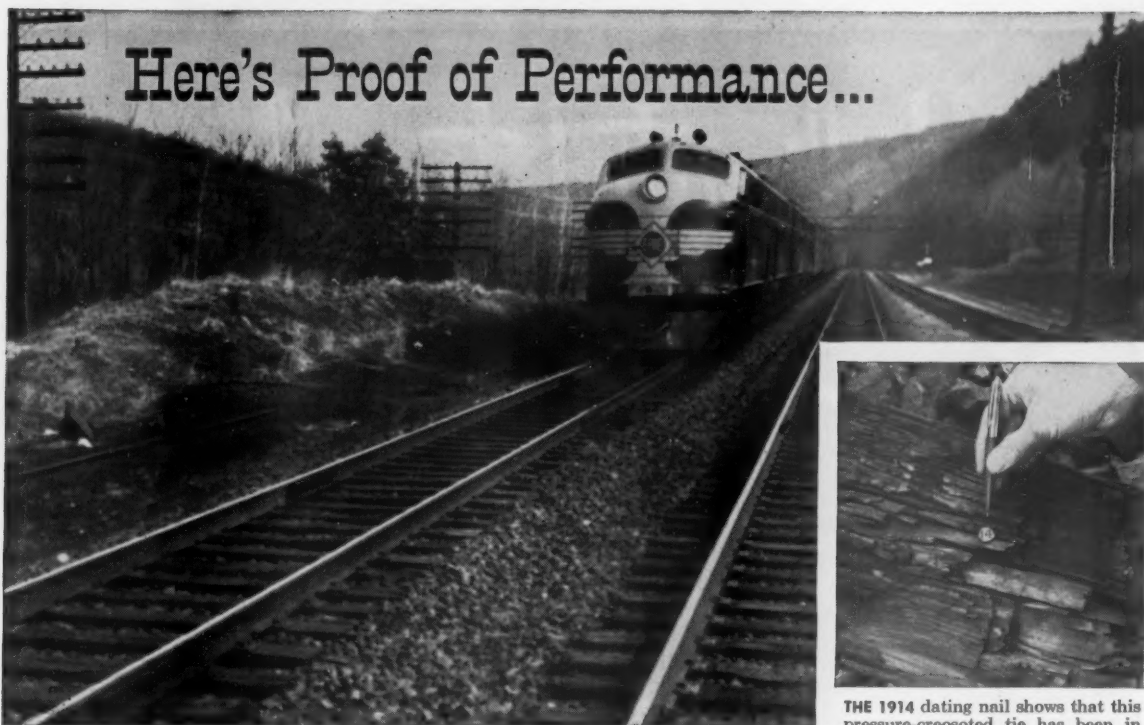
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WESTBOUND Erie train at a point east of Lackawaxen, Pa. Erie trains supported by pressure-creosoted ties in 1953 carried nearly 27 billion gross ton miles of freight and equipment plus nearly 10 million passengers.



THE 1914 dating nail shows that this pressure-creosoted tie has been in track on the Erie east of Westcolang, Pa., for 40 years.

Erie Railroad has used *pressure-creosoted* ties since 1914

• Forty years ago the Erie Railroad decided to use pressure-creosoted ties, and the decision has proved to be a profitable one. Today, there are 13,520,283 pressure-creosoted ties in track on the Erie, and their life expectancy is 30 years on main line straight track and 25 years on curves.

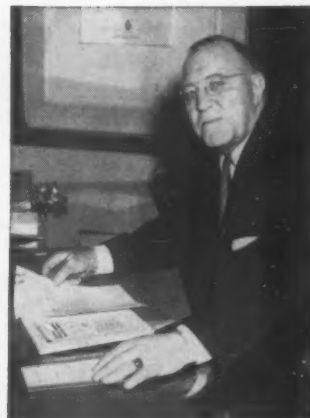
Blair Blowers, Chief Engineer, estimates that it would cost the railroad two to three times as much to use untreated ties as it does to use pressure-creosoted ones. "You just can't compare pressure-creosoted ties with untreated wood for long life, dependability, and economy," he adds.

The Erie Railroad uses an 80% Creosote—20% coal tar solution for cross

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BLAIR BLOWERS, Chief Engineer of the Erie Railroad.

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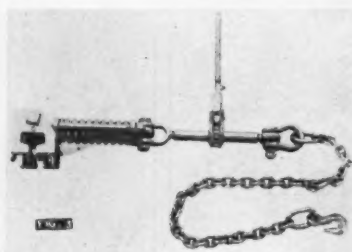
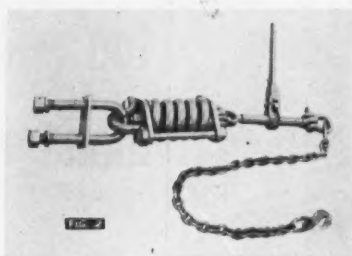
What's New in Products



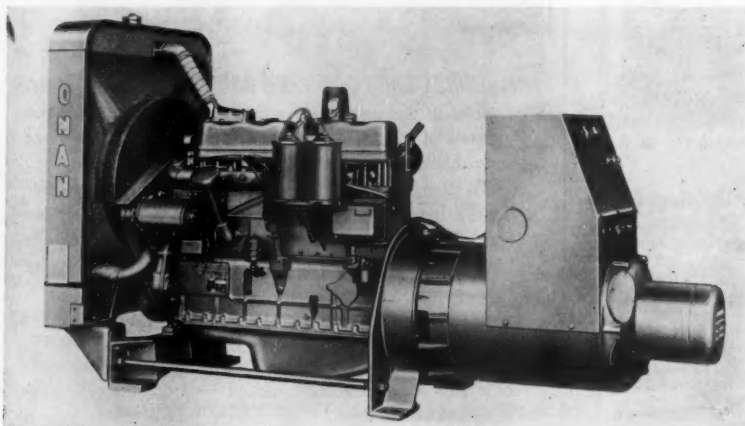
Piggyback Tie Downs

Designed and built by American Forge & Manufacturing Co., Pittsburgh, in conjunction with a large railroad, this piggyback tie down device (Fig. 1) incorporates a new Fabreeka-type snubber to absorb shock and thrust, and employs a heavy-duty AFM ratchet-type railroad binder to position, tighten and hold trailers on flat cars. Single trailer cars use eight, double trailer cars 16 in that particular railroad's system. The large hook at the right attaches to car side rail (or bar), affording flexibility in positioning the tie down.

Developments for other railroads include such variations in spring snubbers as Figs. 2 and 3, employing stand-



ard car springs. Fig. 2 unit secures to car deck at determined positions; Fig. 3 unit uses fixed sliding grab on rail added to car sides.—Canton Manufacturing Company, 2407 13th st., N.E., Canton, Ohio, sales agents •



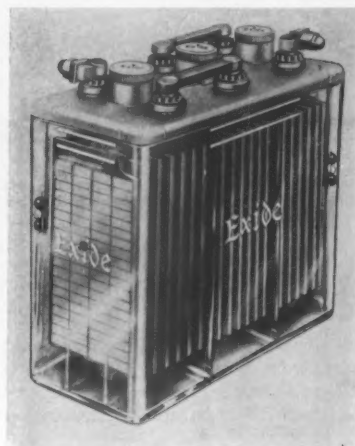
75-KV Generating Plant

This emergency electric generating plant of 75,000-watt capacity meets requirements where interruption of electric power would be costly. The generator provides excellent electric motor-starting characteristics.

The plants Model 75HR, are gasoline-engine-driven units which will provide either 75,000 watts of 60-cycle a-c

at 1,800 rpm engine speed or 60,000 watts of 50-cycle a-c at 1,500 rpm engine speed. Power is furnished by a 6-cylinder engine which has 602 cu in. piston displacement and delivers 155 hp at 1,800 rpm. The engine has overhead exhaust valves and Stellite-faced exhaust valve seat inserts. It has a 12-volt starter, a leak-proof water pump, and at full-rated load consumes 0.152 gal of gasoline per kwh.

The generators are designed to permit parallel operation, and equipment for paralleling is available. The generator is coupled to the engine by a semiflexible drive disc, assuring permanent alinement, and it is air-cooled by a fly-wheel blower. The control box, mounted over the generator, is equipped with necessary engine meters, gages and switches. The automatic voltage regulator is installed inside the control box. D. W. Onan & Sons, Minneapolis 14, Minn. •



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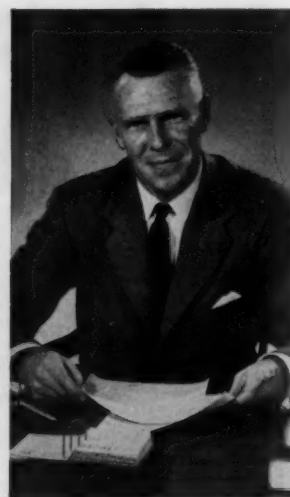
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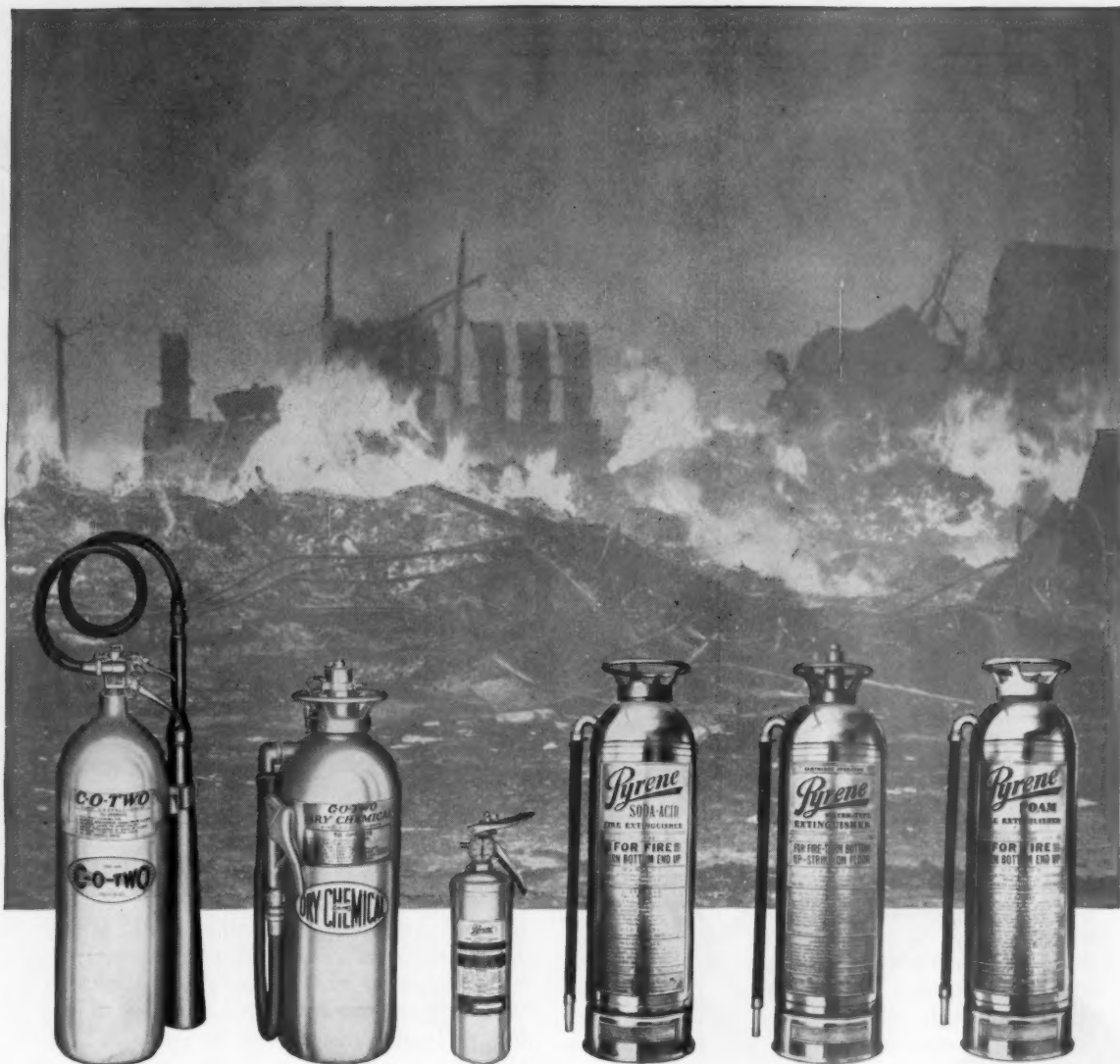
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Incentive Pricing— And Minimum Rates

"Any exercise of the minimum rate-making power by a regulatory agency inevitably results in a government-created division of the traffic by the carriers affected. This follows, inasmuch as traffic flow inevitably adjusts itself to any given rate relationship prescribed." So does Ford K. Edwards, well-known analyst of transportation costs, criticize the tendency of regulatory bodies to divide the traffic or to "keep everybody in business."*

Instead of dividing traffic by such artificial means, Dr. Edwards urges, both carriers and regulators should seek a combination of rates and services which will move any given shipment at the lowest total "incremental cost." To achieve this maximum fitness and economy, this analyst would provide a wide scope for incentive pricing, through which the inherent transportation advantages of any given mode of transportation may be given recognition.

A program to achieve this goal must have these ingredients, among others:

(1) Differential pricing should recognize the cost factors of volume, frequency, loyalty, etc.;

(2) Minimum rate orders should be limited to situations where a destructive rate war clearly promises to worsen, rather than strengthen, the net revenue position of any mode of transportation;

(3) "Equality of opportunity" should mean "creating an equality of opportunity to develop fully one's economic capacity"—not "an equal opportunity to divide the traffic."

Dr. Edwards emphasizes that an important practical problem is "the adequacy of information, on costs in particular, upon which inherent advantages as between modes of transportation are determined." Corollary to any lack of this information, he warns, is the question whether competing carriers can be trusted to respect out-of-pocket costs.

It is also hard to determine how much traffic one may reasonably expect to get with any given rate adjustment. "Were it not for this factor, rate-making could be reduced to a combination of

cost-finding and arithmetic." The cost section of the ICC has made wide use of two approaches: an estimate of the added increments of business by observing the behavior of costs for a group of firms whose volume of output has been fluctuating over a period of time; and by taking a single period of time and comparing the costs for firms with a wide range of output.

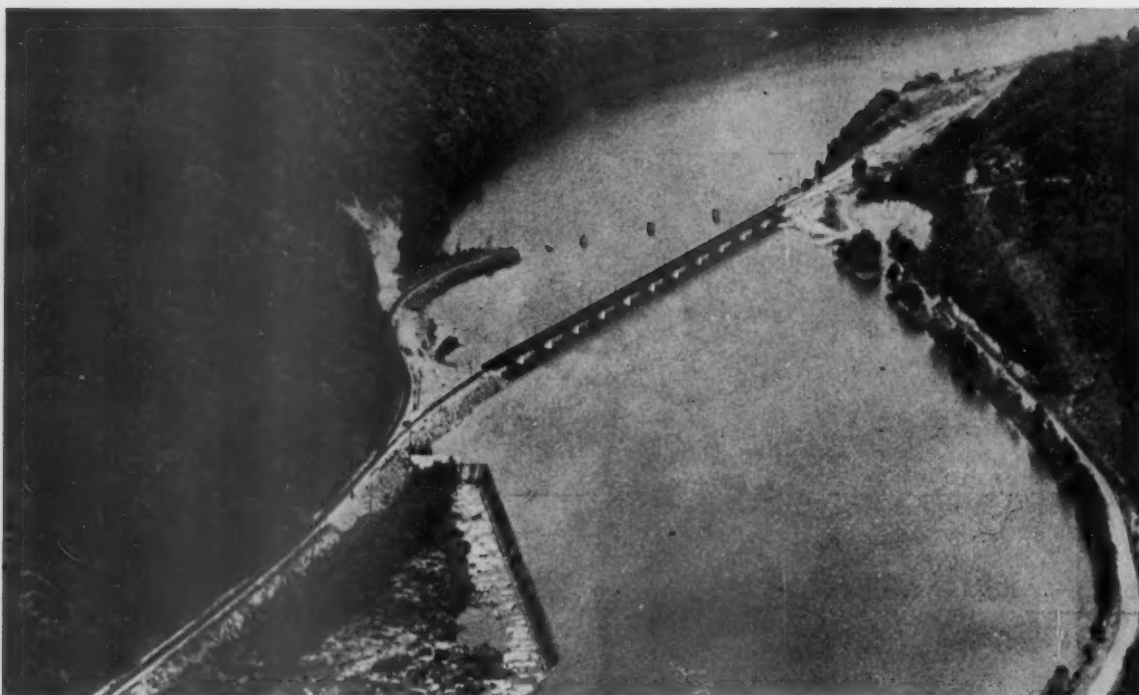
Dr. Edwards finds a useful contrast between the policies of the utilities and of transportation agencies. The key to the mass markets in electric power and natural gas, he says, has been the widespread use of incentive pricing, in which block rates, volume rates and other forms of quantity discounts are widely resorted to. "Such pricing programs rest on a full and complete exploitation of the marginal revenue principle. Utilities not only differentiate between residential, commercial, and small and large industrial consumers, but each customer's consumption is so differentiated (by 'steps' or 'blocks') as to encourage maximum utilization of the company's plant and facilities. Even the small household consumer gets lower rates as his use increases."

In contrast, says Dr. Edwards, discounts given by transportation agencies to attract volume consumption are too often applied "across the board" to all traffic. "This method of attracting volume business is inevitably accompanied by an increasing 'erosion' of net revenues on the business already at hand. In short, where commodity rates are granted on the basis of quantity movement, the lower rate is always applied to *all* carloads offered—not solely to the incremental carloads above given minima—as would be the case in utility block pricing."

Actually, block pricing principles have long been used in transportation. Carload *vs.* less-carload rates are a form of this concept. But the railroads do not go nearly as far with this practice as sound economics permits.

"Generally speaking, the rate problem appears to be one of so differentiating between markets, or users of the service, as not to unjustly injure one shipper in relation to another shipper in a common market. Where the business operations of each are dissimilar, or the large shipper is in a position to exercise the advantages of bigness in any event, a failure to differentiate the markets may accomplish little purpose. Rather, it may operate to limit fitness and economy and the full exploitation of the carrier's capacity for mass output with its attendant possibilities for a reduction in unit costs and charges to all users of the service."

*Mr. Edwards is director of the Department of Coal Economics, National Coal Associates, Washington, D. C. Prior to 1951 he was director of the Bureau of Accounts and Cost-Finding, Interstate Commerce Commission. His views were presented before the American Economic Association annual meeting in Detroit on December 28, 1954.
†"Incremental costs" are defined as the carrier's out-of-pocket costs plus the supplemental expense borne by the shipper in using any particular carrier (e.g., blocking and weather protection for freight shipped in open-top cars).



RELOCATION of bridge over James river at Snowden, Va., eliminated 6-deg curve at west end (upper right) and reduced curvature at east end (left) from 8 deg to 2 deg 30 min. Old alignment and bridge piers are still visible above new structure in picture. Grade for the line change

was built while new bridge was under construction, and work was scheduled so that the new approaches were ready to be cut into the existing line when the bridge was completed. The new line was put into service a little over four months after erection of steel work on the bridge began.

IN RELOCATING RIVER CROSSING . . .

Unusual Bridge-Erection Plan

Chesapeake & Ohio employs some interesting techniques in constructing new 1,200-ft through-girder structure over James river in Virginia

The Old . . .



TRUSS SPANS with deck-plate-girder approaches comprised the old crossing of the river.

The New . . .



THROUGH plate-girder spans, each 100-ft long and 10-ft deep, form the new 1,200-ft structure.

How Piers Were Built

Supports for the new girder spans consist of two concrete abutments and 11 intermediate piers spaced at 100-ft intervals, center-to-center. Each of the piers is 29 ft high and 28 ft wide at the top, increasing to 34 ft at the base. The piers are placed at right angles to the center line of the bridge, rather than skewed to the angle of water flow. By doing this, construction costs were reduced, yet the flow of the river was not hindered beyond permissible limits.

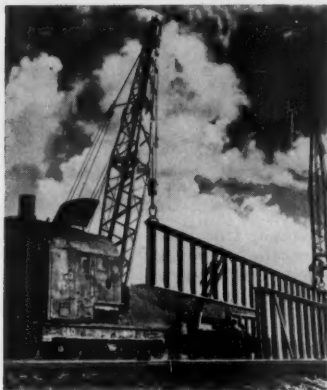
The piers were constructed in water 23 ft deep, and construction was made more difficult because of large boulders and the uneven rock floor of the stream bed. In order to erect cofferdams, a temporary sand island was built at the location of each pier. Sheet piling was

then driven into the sand to form a cofferdam, after which the space within the piling was excavated to the rock bottom so that concrete for the piers could be placed. A single line of sheet piling was used except at locations where the bottom was extremely rough, in which event two lines of piling were driven.

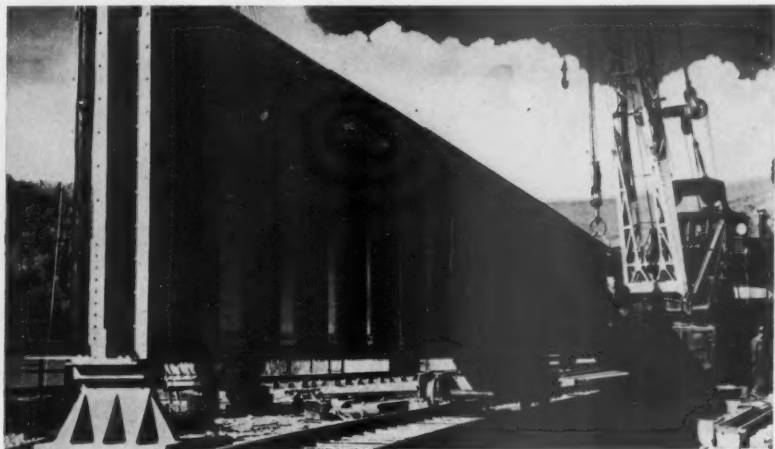
After each pier was constructed, the sand island was shifted to the site of the next pier. The material was transferred in two moves by a clamshell crane mounted on a barge. In the first move the island was shifted to about the halfway point; in the final move it was transferred the remaining distance to the next cofferdam.

In placing the concrete for the piers and abutments, a Pumpercrete machine was employed. A total of 4,500 cu yd of concrete was used, some being pumped as far as 1,200 ft.

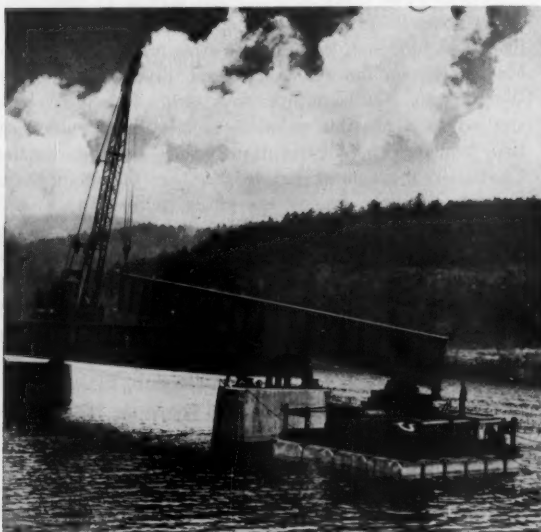
Placing the Spans . . .



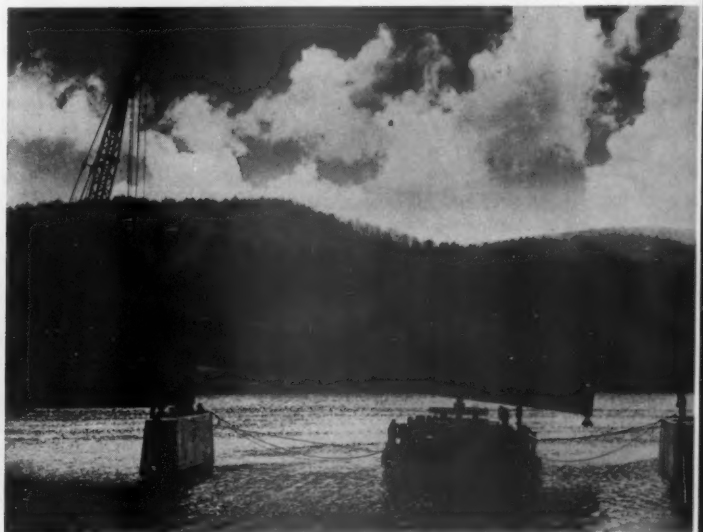
1 GIRDERS were moved to bridge site where they were reloaded onto a . . .



2 . . . DOLLY car, one at a time, by locomotive cranes. Each girder was then moved on the dolly to the end of the rails on the bridge where the dolly was used as a fulcrum in lowering the far end of girder onto a . . .



3 . . . BARGE, consisting of 24 pontoons, with blocking built up to support girder at correct elevation. Crane then lifted near end of girder and the dolly car was removed, after which the girder was . . .



4 . . . FLOATED between the piers. The barge was then used as a fulcrum while the extreme end of the girder was "levered" onto the far pier by the crane. Finally, the near end of girder was placed on its pier bearing.



AT MOUNT VERNON, as No. 358 slows for the station stop, the train baggageman uses a hand jack to move loaded "Cargotainers" to the car door. Mail and express in the baskets has been presorted.



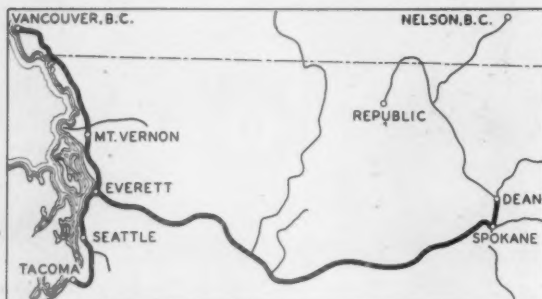
CONTAINERS are removed from car with the Hyster trucks. The baggageman calls off the basket destination as it is removed. The whole operation can be completed in 8 to 12 minutes.

How the GN Cuts Head-End Delays

Fork trucks and steel-wire containers have reduced the length of station stops and saved a set-out on the Cascade division

A combination of steel-wire mesh baskets and fork lift trucks is being used successfully to reduce head-end station delays at Everett, Wash., and Mount Vernon on the Great Northern's Cascade division.

Loading-unloading time for mail and express has been cut more than 50 per cent, and, at one point, the need for a set-out mail and express car has been eliminated. As a result, the GN has reduced delays to passenger trains and effected some real cost reductions.



GREAT NORTHERN container-using lines (heavy) and connections in the Pacific Northwest.

The Cascade division operation is still in the nature of an experiment, although permanent adoption seems likely. Additional containers already are on order. Meanwhile, on the road's Spokane division, in eastern Washington, the container-fork truck plan is being studied as a possible solution to handling problems at two transfer and distribution points on the division. Container movements originating on the neighboring Cascade division already are going to Spokane.

Interest on the GN in mechanical handling equipment for storage mail and express dates back more than two years. Earlier experiments, conducted out of Minneapolis-St. Paul, were described in *Railway Age*, March 9, 1953, page 115. That experiment was later abandoned and the steel-wire containers, called "Cargotainers," were transferred west to the Cascade division. Sixty of these baskets are now in use there, and ten more are on order. The fork-lift trucks used in the present work are 2,000-lb capacity units, made by the Hyster Company.

Mount Vernon, midway between Seattle and Vancouver, B. C., is a transfer point for the truck distribution of mail and express both to branch-line towns where freight service only is maintained and to off-line communities in the area.

Formerly, the local, No. 358-359, sided a set-out car



ACROSS THE PLATFORM the baskets are spotted beside the waiting highway trucks, and drivers transfer the loads to their vehicles. Train loading and unloading operations formerly caused delays of 25 to 45 minutes.



AT EVERETT, where formerly several trains were delayed by manual unloading operations, an arrangement similar to that at Mount Vernon is used. After a car is unloaded, the containers are moved to a waiting mail truck.

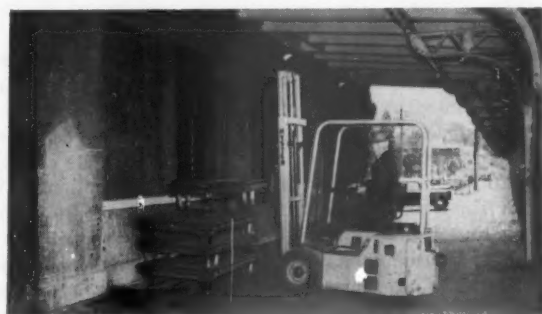
at Mount Vernon, dropping it in the morning on the northbound run and picking it up in the evening on the return trip to Seattle. This meant a switching operation for the road crew, plus the fact that the passing track was blocked for approximately nine hours each day. The story of how this set-out was eliminated, for all except unusual conditions, with obvious operating benefits, is told in the accompanying pictures.

Newspapers Are Easier, Too

An outstanding example of the time and labor-saving utility of the Hyster-"Cargotainer" combination is in the handling of newspapers from Vancouver, B. C.

The GN transports two big shipments of daily newspapers from that city, destined to points in eastern British Columbia. This operation formerly involved manual loading of approximately 200 bundles daily at Vancouver; then their unloading and reloading on the eastbound "Western Star" (No. 4) at Everett; and finally their unloading again at Spokane, where they are picked up by truck and carried northward again over the border to Trail, B. C., and Nelson. (The actual saving in delivery time in this roundabout route is about 12 hours, as against a cross-Canada routing.)

The 200 individual bundles now are moved in "Cargotainers," with manual handling only at the rail-truck interchange at Spokane. The containers, meanwhile, are reloaded at Spokane and returned to Everett on the westbound "Cascadian" (No. 5) the following morning.



EMPTY BASKETS are collapsed and stacked. Some await outbound shipments and others are deadheaded back to originating station.



OUTBOUND, the "Cargotainers" are loaded prior to train arrival. Station delays thus are held to a minimum.



TWO 800-HP diesel-electric locomotives operating multiple-unit on the White Pass & Yukon

Diesels for Alaska

Lightweight units must negotiate 3.9 per cent grades with high winds and heavy snow at 65 degrees below zero

The 36-in. gage Pacific & Arctic Railway & Navigation Company, commonly called the White Pass & Yukon Route, is placing two new diesel-electric locomotives in service. Built at Erie by the General Electric Company, they will replace steam locomotives for hauling freight and passengers between the port of Skagway, Alaska, southern terminus, and Whitehorse, Canada, on the Yukon river.

This 110.7 miles of 36-in. gage railroad, involving 3.9 per cent grades and 24-deg curves, has been in operation since 1900. Often unbelievable climatic conditions are encountered. Temperatures of 65 below zero are common in the mountainous section and winds of gale force are quite prevalent. The region in the vicinity of White Pass is subject to particularly heavy snowfall.

Box-type cabs are used on these locomotives to insure access to the engine compartment for inspection and maintenance during inclement weather. The locomotives meet ICC requirements and are designed for a Cooper's bridge rating of E-27 and to negotiate curves of 26 deg when coupled for multiple-unit operation.

A single operator's cab is at the front end of each unit, just behind a reinforced sloping nose section capable of absorbing the high buff stresses imposed by heavy snow slides. In lieu of the customary pilot a bolted-on snow plow is attached to the platform. As an added precaution against trouble with snow, rail flangers have been incorporated on the leading truck to remove snow from between the rail heads.

The trucks are of the rigid bolster, three-axle design. All axles are motored and fitted with Timken roller journal bearings. The 34-in. wheels are rolled steel, multiple wear and have clasp-type brakes.

Power is furnished by a six-cylinder, 9 by 10½ in. Alco 251A, turbo-supercharged, four-cycle diesel engine, rated 800 hp at 1,000 rpm. The main traction generator and air compressor are direct connected to the engine. An auxiliary machine, consisting of a split-pole exciter and auxiliary generator in the same frame, is belt-driven from the main generator. The radiator fan and traction motor blower are both motor-driven by power from the auxiliary generator.

The locomotives are fitted with dynamic braking. This

will save wheel and brake shoe wear and facilitate smooth handling of trains when descending the heavy grades encountered on this railroad. The braking is arranged for multiple-unit operation and a "dynamic interlock" has been included to help prevent slid flats which might result from locking of the locomotive wheels if the air brakes were applied too heavily when in dynamic braking. The air for 14EL independent and automatic air brake equipment is supplied by a Gardner-Denver WXE 223-cfm compressor. Provision is made to permit adding alcohol to the compressor inlet air during winter operation to prevent freezing of moisture in the train lines and reservoirs.

Some heat must be added to the coolant system in winter to keep the engine at its most efficient operating temperature. During normal operation, a Vapor-Clarkson water heater operates automatically to help maintain proper cooling water temperature. During standby periods of engine idling, however, more heat may be needed. Two methods are used: First, the Vapor-Clarkson heater will continue to operate when required. Second, the coolant can be further warmed by submerged Calrod electric resistance heating units. These are connected to the main generator during engine idling in one of the first three throttle notches. It is expected that engine wear and fuel consumption will thereby be reduced.

PRINCIPAL LOCOMOTIVE DATA

Wheel arrangement	C-C
Maximum locomotive speed, motoring, mph	40
Maximum locomotive speed, braking, mph	32
Maximum dynamic braking, lb	25,000 at 8.8 mph
Traction effort at 30 per cent adhesion, lb	50,220
Traction effort at continuous motor rating, lb	25,000
Locomotive weight (fully loaded), lb	167,400
Coupler height, in.	26½
Draft gear	Miner friction
Height overall, ft-in.	14-1½
Width overall, ft-in.	10-7¾
Fuel oil, capacity, U. S. gal	540
Lubricating oil capacity, U. S. gal	100
Water, capacity, U. S. gal	85
Sand, capacity, cu ft	12



ECONOMIC order quantity is mainly a function of two factors—price and rate of consumption.

How Big Should Inventory Be?

Stocks on hand should be small—and they should be big!—Purchasing, stores, and accounting costs have to be considered

By DR. FRED J. KNIGHT

Management Consultant
Cresap, McCormick & Paget

An inventory obviously ought to be small, because it costs money to keep it. At the same time an inventory ought to be large, to avoid the expense of frequent re-ordering, and to assure availability of whatever may be needed by the using departments.

As with most things, one can go to extremes in either direction. Since inventory cannot be small and large at the same time there must be a compromise. Mathematics can be employed to determine just what compromise to make so as to enjoy the minimum cost. Systematic methods of ordering can be established to assure availability of materials when needed.

Mathematical analysis begins with the separation of the costs of procuring and holding inventory into two classes. One class is called "fixed costs," by which it is

meant that these costs remain about the same for each order placed, no matter whether the order is for a large amount or for a small amount. This class of costs naturally includes paperwork, such as the work of the stores department in preparing and reviewing the order, the work of the purchasing department, and the work of checking and paying invoices. Much of the work of receiving goods and putting it on the shelf is as great for a small order as for a large one.

The second class of costs, "variable costs," embraces expenses which will be increased if the size of the order increases. In general, the larger the inventory the more storage space must be provided. Furthermore, more money will be tied up, at a larger cost for interest and insurance risk. Depreciation from age and shelf wear may rise, and the probability of obsolescence increases with the amount of goods on hand.

The contrasting behavior of these two classes of costs is illustrated in the accompanying diagram. The costs

shown are per unit of material. The per unit fixed costs (paperwork, etc.), which are the same for big and little orders, drop as the size of order increases. This happens because a fixed amount of money is being divided by an increasing order quantity, to produce a decreasing cost for each unit. The per unit variable costs (storage, interest, obsolescence, etc.) rise as the size of order increases. This is understandable, because although the amount of material used in any period of time is the same, the number of units on hand, and hence the cost of keeping them, will rise as we go to larger shipments.

Orders by Formula

The behavior of costs may be summed up in a rough and somewhat inaccurate statement. As the size of orders increases, the costs of procurement fall, per unit of material; but the costs of holding the inventory rise. Of course, it is the total cost per unit of material which we wish to hold down. This is the total of the two classes of costs. In the diagram it is represented by the top curve. When the size of the order is increased, the total unit cost first falls in sympathy with a rapid drop in procurement expense, but later it turns up because the cost of holding inventory becomes dominant. At some place on the belly of this curve there is a minimum point. In order to achieve the lowest possible expense, our order quantity should be that corresponding to this point.

By arithmetic, algebra, and differential calculus (steps which are simple to a mathematician and of no interest to anyone else) a formula can be obtained which gives us this order quantity which will result in the lowest possible unit cost. A simple formula sufficient for many purposes is:

$$\text{Economic quantity to order} = \frac{2 NC}{IP}$$

where

N = the number of units consumed annually.

C = the sum of the fixed costs per order (paperwork, etc.).

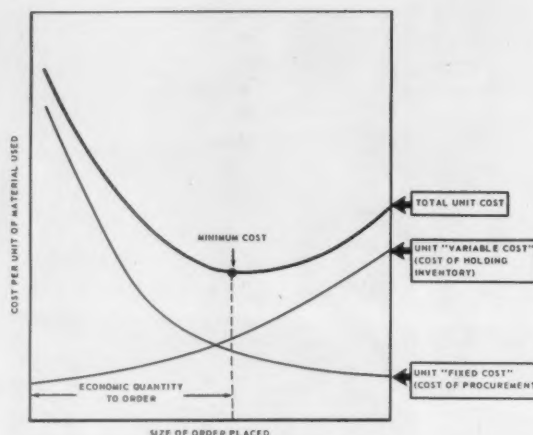
I = the sum of the variable costs (interest, obsolescence, storage, etc.) expressed as a percentage of the value of goods stored.

P = the unit price.

Numerical values to substitute in the formula are obtained by study of the relevant actual costs of the company for whose use the formula is intended.

At this point the formula could be turned over to the storekeeper with instructions to order accordingly. But what would happen is plain: storekeepers are not trained in mathematics, and even if they were they would not want to do a lot of figuring every time they place an order. We can get around this by doing the work for them and presenting the answer in the form of a table.

Examination of the formula will show a mathematician that the quantity to order depends mostly on two factors; the price, and the rate of use. Other factors in the formula are nearly constant for most kinds of storehouse items. It is therefore safe to construct a table showing the quantity to order for a wide range of prices and rates of use, and the storekeeper can use this table instead of fussing with the formula. Each company should construct its own table to fit its own circumstances, but the general characteristics of such a table are illustrated in the sample shown herewith.



How fixed and variable costs are related.

Many people will say immediately that common sense tells them that one cannot safely depend on a table to fit all circumstances—and they are right. The table is precisely correct for average situations. But for some extreme situations it does not fit. The table should not be employed for bulky items used in large volume, without first checking to see if there is enough storage capacity to accommodate the "economic" quantity. There are not many such items, however, and they can easily be treated as exceptions. Oil, lumber, and steel plates and bars are typical examples.

Experience with ordering tables shows in their favor:

1. Storekeepers like to use them. They save work and simplify it so that less experienced people can be trusted to determine the quantity to order.
2. Quantities ordered by different stores all over the system become consistent, and it is easy for the general storekeeper to spot check and see if quantities ordered are reasonable and proper.
3. The dollars tied up in inventory generally decline promptly, and stay down.
4. The number of purchase orders placed and the number of requisitions received by general storehouses are generally reduced.

Some explanation of points 3 and 4 may be in order. The table usually reduces the dollars tied up in inventory by cutting down on the quantity of the high priced items lying on the shelf. These are likely to be ordered more frequently than under past practice, the amount of each order and the amount lying on the shelf being reduced accordingly.

Although the frequency of orders placed for expensive items may increase, these items are in a minority, being far outnumbered by items of small unit cost. When it comes to the "5 and 10¢" items, the economic quantity to order goes up to perhaps a year's supply or more. Traditional practice generally has limited the size of each order to not over a three-months' supply, regardless of price. Ordering a year's supply of these numerous items at a time, therefore, cuts the number of orders sharply. Operating costs in the storehouse, the purchasing department, and in the accounting department benefit correspondingly.

The traditional railroad storehouse method of ordering is to take a physical inventory every 30 or 60 days,

consider the situation of each item, and place orders accordingly. This must have been a practical solution in its time, or it would not have become widespread. However, it does not satisfy today's needs for two reasons: first, today's labor rates make it expensive to take inventory; and second, it makes the railroad vulnerable to running out of stock on some of the thousands of special parts needed for equipment maintenance. The problem today is to keep on hand a small number of each of a tremendous number of items without running out of any of them. This is more difficult now than when a relatively small number of items was kept in bulk supply.

"Perpetual" Inventory's Advantages

The "check-off" or "perpetual inventory" system, widely used in other industries, appears to be an increasingly popular answer to these difficulties. This system will reduce the inventory if properly applied, because fresh orders are placed the same day the need arises. Generally, the time to order is designated by the amount on hand (or available) reaching a predetermined order point. Under the old periodic inventory plan, the order may not be placed until a lapse of up to 60 days after a low point has been reached. Delaying the ordering raises the possibility of running out of stock, and a fat backlog must be carried on the shelf to offset this risk.

Determination of the order point can be treated in a scientific manner by application of formulas based on the laws of chance. The chance of running out of stock can be evaluated mathematically and weighed against the probable loss in case equipment were to be held out of service for a lack of material for repairs, for example. Such refinements are, however, of questionable validity in ordinary circumstances because neither the probabilities nor the values involved can be accurately determined. Furthermore, complex formulas may confuse personnel and result in favoring rules over common sense.

For most items, a satisfactory order point can be set informally. For items in regular use, it is desirable to order more stock when the amount on hand is reduced to a quantity sufficient to last until the new shipment is received. To this should be added a small quantity as insurance against extra rapid usage, or unusual delay in shipment. Time must be allowed for review and approval of the storekeeper's purchase requisition, for preparation

and issuance of a purchase order, and for the vendor to ship the merchandise. As every stores man knows, this time will vary widely and sometimes very quickly with general economic conditions, so that no fixed rule can be set. When material is in easy supply and the vendor's service is good, a 45-day supply may prove a satisfactory order point. It is common practice for purchasing departments to issue periodic reports on anticipated procurement times for the various classes of material, to be used as a guide by storekeepers to determine the order point.

The check-off system and the ordering table make good teammates. The check-off tells when to order, and the table tells how much.

Cut Inventory 30%

The foregoing has had to be simplified, and side issues have been ignored for the sake of clarity and brevity. But the ingredients of a systematic control system on a soundly scientific base are there. It is not possible to state, unless samples of data are taken and statistically analyzed, just how much inventory reduction should be expected to result from these methods in a particular situation. Under ordinary circumstances, however, a reduction of 20 to 30% would not be surprising.

Fairly close adherence to the rules of the system is generally advisable, both for maximum economy and for ease of administration. However, there arise at times special factors which outweigh these considerations. Threatened scarcity and rising procurement lead times come with war scares and even with a rapidly rising phase of the ordinary business cycle. Theoretically, such changes should be allowed for by going back to the economic lot formula and recalculating the ordering table. For practical purposes, however, it is better to make an approximate correction, either across-the-board, or applying only to specified classes of commodities. A simple method is to issue instructions to raise all order points by 20, 30, or 50%. Order quantities may likewise be increased. These measures are simply superimposed on the regular procedures, and the ordering table continues to serve as the basic controlling device. Special reserves might also protect selected items of particular strategic importance. When the emergency has passed, the superimposed regulations are removed, and the system returns to normal.

By the same rather crude but effective devices, the amount of investment in inventory can be systematically raised or lowered within a rather wide range, without throwing it out of balance or injuring service to using departments. Although this would normally be undesirable, since it would get away from the most economical level, there may be times when financial policy makes it advisable.

It is theoretically proper to recalculate the table whenever any element of cost, such as interest rates or salary level, changes. But again, for practical purposes, it is not worth while to do this unless the changes are substantial.

"Program Materials"

Procedures described above are for application to storeroom stocks for regular usage. Precautionary measures should be set up to avoid accumulation of items which rarely will be called for, and which can be fabri-

QUANTITIES TO ORDER

Annual Unit Usage

Unit Price	10	25	50	100	250	500	1,000	2,500	5,000	10,000	25,000
\$.10	10	25	50	100	188	292	417	625	833	1,250	2,083
.25	10	25	50	75	146	208	250	417	625	833	
.50	10	25	38	58	104	125	167	313	417		
1.00	10	19	29	42	63	83	125	208			
2.50	8	15	21	25	42	63	83				
5.00	6	10	13	17	31	42					
10.00	4	6	8	13	21						
25.00	3	4	6	8							
50.00	2	3	4								
100.00	1	2									
250.00	1										

cated in the shop without much trouble or obtained after need has actually arisen. A general policy should be worked out and expressed in a set of rules for guidance of storekeepers. A single store on the railroad can be designated to protect the system with a limited supply of such items, which can be rushed to other points. Storekeepers at points where a need may appear can be provided with lists of what is available so that they will know where they can be obtained quickly.

Material for car building or rebuilding projects, track maintenance, etc., may best be controlled by tying in with budgets or other planning devices. Careful planning

far in advance of the work, and close adherence to plans by the working forces, help make it possible to arrange delivery shortly before need, and so keep down the inventory. Unhappily, changes in plan sometimes are forced by changes in general economic conditions and the state of railroad finances. Despite the risk of such disappointments, it is very worth while to work according to careful plan insofar as circumstances permit.

The question "How Big Should Inventory Be?" can be answered in this way. If methods such as described herein have been followed systematically, the inventory will be the size it ought to be.



TO SAVE \$50,000 A YEAR . . .

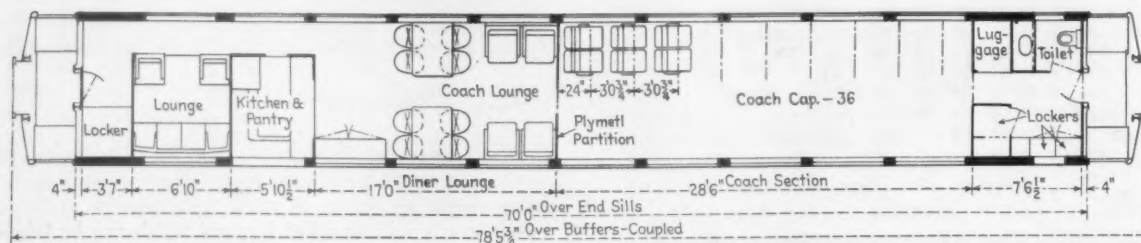
C&O Builds an All-Purpose Car

A coach-lunch-counter-lounge car has been rebuilt by the C&O from a car that formerly contained only coach seats and a small dining area. The purpose of the conversion was to provide in a single car the following accommodations: Pullman lounge space; lunch counter; table space for eight; lounge chairs for beverage service; and a coach section for 36 passengers.

Use of this car on the moderately patronized run between Ashland, Ky., and Louisville releases a full diner and a standard length coach to other service. Operating costs are thus reduced substantially with no sacrifice of passenger convenience. In fact, a principal consideration in developing this new car was that quality of service should not be compromised in achieving a reduction in expenses. The C&O estimates that savings will be about \$50,000 a year from the reduction of consist, lessened terminal costs and lower dining car expenses.

The ceiling of the rebuilt car is corrugated, perforated, aluminum sheet which closes off the old-fashioned clerestory. The clerestory serves as a plenum chamber for distributing conditioned air through the perforated ceiling and the ends of the corrugations. Lighting employs simply the old incandescent bulbs, but the glass bowls have been replaced by large white Plexiglas diffusers, two feet square, framed in the corrugated ceiling structure. The flanges of the Plexiglas diffuser rest on foam rubber strips glued to an angle frame.

The window installation incorporates extruded rubber moldings for a sealed double-glazed installation which requires no window frame other than the car structure itself. The inside glass may be removed only from the inside but does not require the removal of any trim or window sills. The outside glass is similarly replaced from the outside.



Financial

(Continued from page 16)
of the Maritime provinces at low rates (\$10,575,000); as reimbursement for operating losses on the "barren" mileage in northwestern Ontario (\$7,000,000); or for operation of ferry service between Cape Breton and Newfoundland (\$2,500,000).

ODM Extends Date for "Write-off" Eligibility

The Office of Defense Mobilization has extended to December 31 the deadline to start construction of railroad cars, locomotives and facilities on which tax write-off benefits would apply. The original date was June 30. The extension covers freight cars, railroad terminal and road facilities, diesel-electric locomotives and passenger cars.

Rock Island, IC May Acquire Waterloo Road

If the 600 stockholders of the Waterloo, Cedar Falls & Northern (and the Interstate Commerce Commission) agree, physical assets of the 128-mile road will be sold to the Illinois Central and the Rock Island. It is expected the new owners will operate it jointly as an independent unit. WCF&N directors approved the sale February 5. Terms of the proposed transaction call for payment of \$6.75 each for the 170,490 shares of common stock outstanding and for assumption of the road's mortgage bond debt.

Atchison, Topeka & Santa Fe.—*Trackage Rights.*—The ICC has approved a plan whereby this road will operate under trackage rights over the Gulf, Mobile & Ohio from Mullins, Ill., through Mazonia to Pequot to rearrange service methods to the Essex coal field. The Santa Fe will abandon 2.2 miles of its track and the GM&O 2 miles of its track between Lorenzo and Hitt, and both roads will abandon operation over segments of each other's lines between Lorenzo and Mullins.

Boston & Providence.—*Reorganization.*—The ICC has authorized Samuel M. Freeman and William P. Sheffield, "as a protective committee" for B&P stockholders, to continue to solicit authorizations from stockholders and to act for them. The committee now represents, the commission reported, holders of 15,604 shares.

Canadian National.—*Sells Four Hotels.*—The CNR has accepted an offer by a Canadian syndicate to purchase four of the road's hotels: The Prince Arthur Hotel, Port Arthur, Ont.; Prince Edward Hotel, Brandon, Man.; and two summer resorts, Minaki Lodge, in Ontario's Lake-of-the-Woods

district; and Pictou Lodge, Pictou, N.S.

Chicago, Rock Island & Pacific.—*Extension of Pullman Lease.*—The ICC has authorized a 10-year extension—to January 1, 1965—of this road's lease of the Pullman's properties in Chicago.

Chicago, Rock Island & Pacific.—*Acquisition of WF&S Line.*—The ICC has authorized this road to acquire and operate the 38.8-mile line of the Wichita Falls & Southern extending from Graham, Tex., to South Hanlon. The RI has been operating this line under a service order issued by the commission (*Railway Age*, August 23, 1954—page 12).

Kansas, Oklahoma & Gulf.—*Modification of Lease.*—The ICC has authorized modification of this road's lease of the properties of the Kansas, Oklahoma & Gulf of Texas to provide allowance for the depreciation and retirement losses for income tax purposes.

New Jersey & New York.—*Reorganization Plans.*—The trustee for this road and the Erie have filed with the ICC proposed reorganization plans. Both would pay off taxes totaling \$148,046 owed to the states of New Jersey and New York. The trustee's plan calls for issuance of new 4% 25-year bonds to redeem \$394,000 of first mortgage and \$628,960 of second and general mortgage bonds, the bonds to equal the value of those redeemed less payments in cash to bondholders with cash available. Interest of \$889,744 owed to bondholders would be paid off with 30-year convertible debentures. Stockholders would receive nothing in the proposed reorganization. The Erie proposed distribution of \$649,716 including \$76,803 realized from real estate sales among the bondholders as follows: \$334,900, first mortgage; \$816, second mortgage; and \$314,000, general mortgage.

Northern Pacific.—*Oil Exploration.*—Greater activity in exploration of the company's oil and gas holdings is contemplated in 1955, according to George M. Washington, vice-president—oil development. Agreements concluded require 39 wells to be started in the Williston basin, Power River basin and central Montana. The NP and the Shell Oil Company are drilling additional development wells in the Cabin Creek field, and similar work is in progress in the Fryburg field near the NP main line west of Dickinson, N.D. Still other agreements are being negotiated.

Pennsylvania.—*Mergers of Subsidiaries.*—The ICC has approved a series of applications by this road whereby it proposes to simplify its corporate structure by decreasing the number of corporations in its system (*Railway Age*, November 15, page 16).

The commission has authorized merger of the Detroit Union Railroad Depot & Station and the Western New York & Pennsylvania into the Pennel Company. The Pennsylvania also was authorized to acquire control of Pennel through ownership of its capital stock, and to acquire indirect control of the Western Allegheny through the Pennsylvania Company. Also authorized was the merger of the Harrison & East Newark Connecting Railroad into the United New Jersey Railroad & Canal. Other proposed mergers are still pending before the commission.

Pennsylvania.—*Trackage Rights.*—This road has applied for authority to operate under trackage rights over 12.9 miles of the Detroit, Toledo & Ironton between Springfield, Ohio, and South Charleston. The Pennsylvania said the operation would facilitate movement of through freight trains between Detroit and Cincinnati.

Wellsville, Addison & Galetton.—*Purchase of B&O Lines.*—The ICC has authorized the Black Forest Lumber Company, Coudersport, Pa., L. H. Lincoln & Son Co., Coudersport, and Patterson Lumber Company, Wellsboro, to intervene in opposition to the proposed purchase of 97 miles of B&O lines in New York and Pennsylvania by the Wellsville, Addison & Galetton (*Railway Age*, December 27, 1954, page 14).

Securities

Central of Georgia.—*Application Dismissed.*—By request of this road, the ICC has dismissed its application to issue 35,000 shares of common stock which was designed to encourage key personnel to acquire or increase financial interests in the road (*Railway Age*, January 24, page 43).

Authorizations

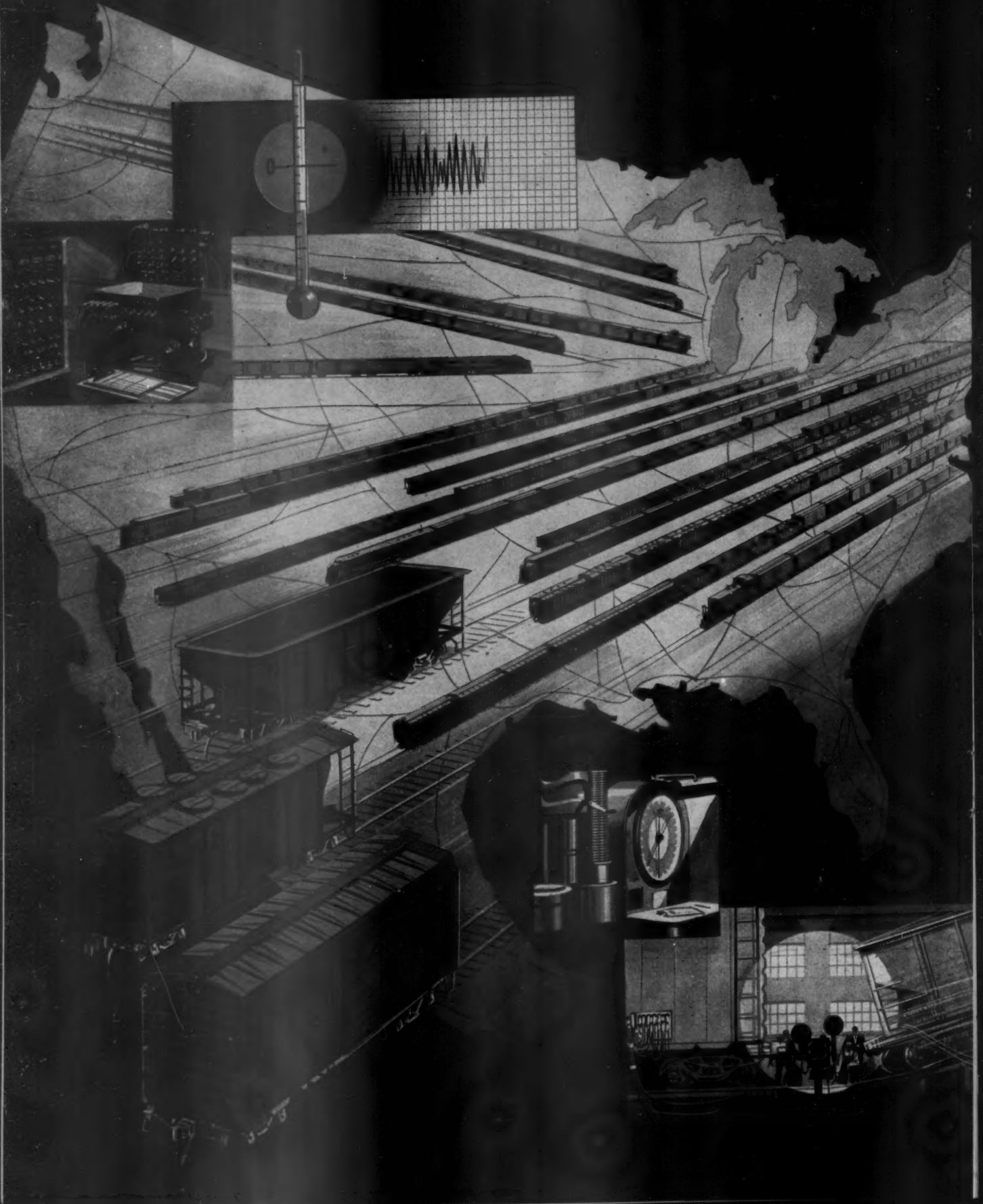
ATLANTIC COAST LINE.—To issue 1,646,854 additional shares of no-par common stock to present holders of 823,427 shares now outstanding. The new stock would be distributed on the basis of two additional shares for each existing share held, and would accomplish a three-for-one split of the road's common stock. (*Railway Age*, January 10, page 193).

MISSOURI PACIFIC.—To assume liability for \$3,900,000 of equipment trust certificates to finance in part purchase of 30 diesel-electric road-switching locomotives costing an estimated \$4,951,966 (*Railway Age*, January 10, page 193). Division 4 approved sale of the securities with an interest rate of 3% for 99.37—the bid of Salomon Bros. & Hutzler and three associates—which will make the annual cost of the proceeds to the railroad approximately 3.12%. The certificates were reoffered to the public at prices yielding from 1.75 to 3.15%, according to maturity.

NEWPORT & RICHFORD.—To issue \$450,000 of first mortgage, 4% bonds due July 1, 1979, of which \$292,000 will be delivered to the parent Canadian Pacific in exchange for a like amount of N&R outstanding 4% sinking fund bonds due January 1, 1966. The balance of \$158,000 will be delivered to the CPR in repayment of advances made to the N&R in that amount.

NEW YORK, CHICAGO & ST. LOUIS.—To issue and sell \$36,000,000 of 35-year income debentures. (Continued on page 46)

The best that science can



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for the*



GREAT AMERICAN RAILWAY *System*

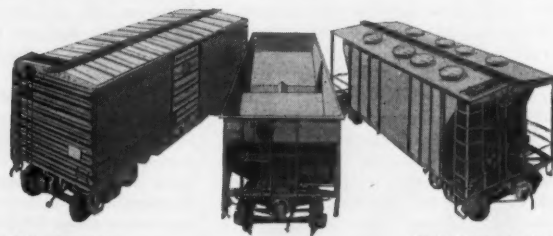
A typical box car (according to the A. A. R.) moves, in one year, on 39 different railroads, including two or more trips on 24 roads.

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Securities

(Continued from page 43)

tures to redeem all 334,166 shares of its 6% series A preferred stock (Railway Age, December 27, 1954, page 16). Division 4 approved sale of the securities with an interest rate of 4 1/2% for \$9.55—the bid of Blyth & Co. and Union Securities Corporation and 48 associates—which will make the annual cost of the proceeds to the road approximately 4.53%. The debentures were reoffered to the public at 100 7/8.

PENNSYLVANIA.—To assume liability for \$6,810,000 of equipment trust certificates to finance in part purchase of 1,279 hopper and box cars at an estimated total cost of \$9,095,500 (Railway Age, January 3, page 11). Division 4 approved sale of the securities, with an interest rate of 2 3/4%, for \$9.652—the bid of Salomon Bros. & Hutzler and three associates—which will make the annual cost of the proceeds to the road approximately 2.82%. The certificates were reoffered to the public at prices yielding from 1.5 to 2.923%, according to maturity.

READING.—To assume liability for \$1,350,000 of equipment trust certificates to finance in part purchase of 200 gondola cars costing an estimated total of \$1,703,000 (Railway Age, January 17, page 27). Division 4 approved sale of the securities with an interest rate of 2 3/4% for \$9.384—the bid of R. W. Pressprich & Co. and four associates—which will make the annual cost of the proceeds to the road approximately 2.97%. The certificates were reoffered to the public at prices yielding from 1.5 to 2.7%, according to maturity.

SOUTHERN PACIFIC.—To issue nominally \$21,091,000 of series D first mortgage bonds, to be held in its treasury until needed and subject to ICC approval. The issue is in partial repayment of capital expenditures of \$28,122,586 made between July 1, 1945 and April 30, 1954 (Railway Age, August 2, 1954, page 28).

SOUTHERN PACIFIC.—To assume liability for \$8,910,000 of equipment trust certificates to finance in part purchase of 335 automobile cars and 46 diesel-electric units at an estimated total cost of \$11,906,473 (Railway Age, December 27, 1954, page 16). Division 4 approved sale of the securities, with a 2 3/4% interest rate for \$9.4706—the bid of Salomon Bros. & Hutzler and three associates—which will make the annual cost of the proceeds to the road approximately 2.85%. The securities were reoffered to the public at prices yielding from 1.5 to 2.9%, according to maturity.

Application

ATLANTIC COAST LINE.—To issue 705,600 non-par capital shares at a stated value of \$11,760,000 to be exchanged in a three-for-one stock split for 235,200 shares of \$30 par capital stock now outstanding.

ERIE.—To issue \$40,288,200 of 5% income debentures due January 1, 2020, to be exchanged for 402,882 shares of its outstanding 5% series A preferred stock on the basis of \$100 of debentures for one share of stock. All the preferred stock would be retired. The Erie informed the commission that its plan would lighten the road's tax burden because interest on debentures is deductible whereas, it said, dividend payments are not.

NEW YORK CENTRAL.—To issue and sell 640,000 shares of its previously authorized capital stock to company employees and officers. Half the issue would be sold through payroll deductions to company personnel and the remaining 320,000 shares would be offered to key employees under purchase agreements. Included in this latter portion of the issue would be 32,000 shares already allotted at \$19.875 per share to A. E. Perlman, president, under an agreement dated October 20, 1954. Central also asked ICC approval of an incentive bonus plan under which the road would distribute stock to employees who perform outstanding services. This stock would be purchased by the company on the open market. Central's board of directors approved the plans November 23, 1954. Stockholders will vote on them May 26.

Dividends Declared

ALABAMA & VICKSBURG.—\$3, semiannual, payable April 1 to holders of record March 4.

ATLANTIC COAST LINE.—stock dividend, 200%, payable February 25 to holders of record February 11.

CENTRAL OF GEORGIA.—5% preferred A and

B, \$1.25, quarterly, payable March 21, June 20, September 20 and December 20, to holders of record March 10, June 10, September 9, and December 9.

CHESAPEAKE & OHIO.—common, 75¢, quarterly, payable March 21 to holders of record March 1; 3 1/2% preferred, 87 1/2¢, quarterly, payable May 1 to holders of record April 7.

ERIE.—\$5 preferred series A, \$1.25, quarterly, payable March 1, June 1, September 1, and December 1, to holders of record February 11, May 13, August 12, and November 10.

ERIE & PITTSBURGH.—guaranteed, 87 1/2¢, quarterly, payable March 10 to holders of record February 28.

FORT WAYNE & JACKSON.—5 1/2% preferred, \$2.75, semiannual, payable March 2 to holders of record February 18.

GREAT NORTHERN.—55¢, payable March 21 to holders of record February 25.

GREEN BAY & WESTERN.—common, \$3, payable February 23 to holders of record February 11; Class A, \$50, payable February 23.

GULF, MOBILE & OHIO.—common, 50¢, quarterly, payable March 10 to holders of record February 18; \$5 preferred, \$1.25, quarterly, payable September 12 to holders of record August 22.

LEHIGH VALLEY.—30¢, quarterly, payable February 21 to holders of record February 7.

LOUISVILLE, HENDERSON & ST. LOUIS.—5% preferred, \$2.50, semiannual, payable February 15 to holders of record February 1.

MAINE CENTRAL.—5% preferred, \$1.25, accumulative, payable March 1 to holders of record February 16.

MISSOURI-KANSAS-TEXAS.—7% preferred A, \$1.25, accumulative, payable April 1 to holders of record March 16.

NASHVILLE, CHATTANOOGA & ST. LOUIS.—\$1, quarterly, payable March 1 to holders of record February 8.

NORFOLK & WESTERN.—75¢, quarterly, payable March 10 to holders of record February 10.

PENNSYLVANIA.—25¢, quarterly, payable March 14 to holders of record February 7.

PHILADELPHIA, GERMANTOWN & NORRISTOWN.—\$1.50, quarterly, payable March 4 to holders of record February 18.

PITTSBURGH & WEST VIRGINIA.—50¢, quarterly, payable March 15 to holders of record February 18.

PITTSBURGH, YOUNGSTOWN & ASHTABULA.—7% preferred, \$1.75, quarterly, payable March 1 to holders of record February 18.

READING.—4% non-cumulative 1st preferred, 50¢, quarterly, payable March 10 to holders of record February 17.

SOUTHERN.—common, 75¢, increased, payable March 15 to holders of record February 15; extra, \$1, payable February 15 to holders of record February 4; 5% non-cumulative preferred, 62 1/2¢, quarterly, payable March 15, June 15, and September 15 to holders of record February 15, May 13 and August 15.

VICKSBURG, SHREVEPORT & PACIFIC.—common, \$2.50, semiannual; 5% preferred, \$2.50, semiannual; both payable April 1 to holders of record March 4.

Security Price Averages

	Feb. 8	Prev. Week	Last Year
Average price of 20 representative railway stocks	85.61	86.05	62.29
Average price of 20 representative railway bonds	98.35	98.61	94.18

Railway Officers

ATLANTA & WEST POINT-WESTERN OF ALABAMA-GEORGIA.—B. E. Taylor, assistant chief law and special agent, has been appointed chief law and special agent at Atlanta, succeeding G. C. Webb, who has retired after 42 years of service.

ATLANTIC COAST LINE.—Norman C. Shepard, division counsel, has been appointed general attorney at Wilmington, N.C.

BANGOR & AROOSTOOK.—The freight traffic department has been reorganized and hereafter will be known as the sales (traffic) department. Frederick B. Lunt, manager of sales

SERVICE Vs. RATES

"Approximately 80% of shippers interviewed mentioned better and faster service by truck compared to rail," says a recent U.S. Department of Agriculture survey of 1952-53 apple shipments from the so-called "Appalachian Belt" in Pennsylvania, Maryland, West Virginia and Virginia.

The study, based on interviews with 78 shippers, 38 motor carriers and six railroads, revealed that 92% of total sales, and 87% of fresh apple sales, moved out of the area by truck. About one-third of the truck shipments were handled by private vehicles, and the balance by for-hire trucks; the latter group, the study says, was dominated by "exempt" haulers, although "a sizeable volume" was handled by regulated common carriers. Rail movements were concentrated in hauls of more than 300 miles, and came principally from larger shippers.

Specific reasons advanced by shippers for favoring truck transportation, ranked in order of importance, were better and faster service, lower rates,

less handling, flexibility in size of shipment, less loss and damage, flexible stop-off service, profit from trucking operations, and prompt payment of claims. Availability of equipment, usually on a few hours' notice, and direct delivery from shipper to receiver also were said to be "widely recognized" as advantages of truck movement. The greatest differentials between rail and truck rates were on short hauls and on long hauls where apples served as back-haul traffic for truckers.

One-third of the shippers interviewed, the department reports, said they would be willing to increase their use of rail transportation if rail rates were at the same level as truck rates. Six-tenths said they would do so if rail rates were 10% lower than truck rates; and nine-tenths if rail rates were 25% lower. On the other hand, approximately 90% of the shippers who used some rail transportation in 1952-53 planned to increase their use of truck transportation "unless rail rates were reduced or quality of service improved."

promotion, has been appointed assistant to vice-president—sales (traffic). **L. W. Wentworth**, general freight agent, has been named freight traffic



Frederick B. Lunt

manager, and **Earle F. Kimball**, assistant general freight agent, has become general freight agent. **John R. Hall**, Presque Isle, has been named



L. W. Wentworth

northern Maine sales manager, and **Waverly M. Alexander**, assistant general freight agent, at Bangor.

BURLINGTON.—**J. W. Terrill**, assistant to general manager, Lines West, has been appointed superintendent of terminals at Lincoln, Neb. **I. G. Toland**, assistant division superintendent at Aurora, Ill., succeeds Mr. Terrill, and in turn has been succeeded by **I. W. Crist**, who transfers from Creston, Iowa. **F. E. Rogers**, trainmaster on the LaCrosse division, replaces Mr. Crist.

C. J. Bonnevier, assistant engineer of buildings, has been appointed engineer of buildings at Chicago, succeeding **A. H. Simon**, who has retired after 33 years of service. **R. P. Cox** replaces Mr. Bonnevier.

R. B. Battey, general freight traffic manager, rates and divisions, at Chicago, has retired after 48 years of service. Mr. Battey's successor is **G. H. Rehm**, freight traffic manager, rates and divisions, who in turn has been

succeeded by **R. E. Barr**, assistant freight traffic manager, rates and divisions. **W. C. Wortz**, assistant general freight agent of the subsidiary Colorado & Southern at Denver, has been named assistant freight traffic manager at Chicago. **C. E. Larsen**, general freight agent, has been appointed assistant freight traffic manager, commerce department, at Chicago.

CANADIAN PACIFIC.—**Ivor L. Jones**, passenger agent in Copenhagen, Denmark, has been appointed general agent at Rotterdam, Holland, succeeding the late **Leo Callaghan**.

C. J. Colombo, general transmission and foreign wire relations engi-



A. M. Fraser

neer, has been appointed assistant to general manager of communications, Montreal, and will direct planning and methods in that department.

P. C. Fuller, division engineer at Schreiber, Ont., has been transferred to the Smiths Falls division at Smiths Falls, Ont., succeeding **J. L. Looney**, resigned.

H. C. Reid, general auditor at Mon-



CHESAPEAKE & OHIO.—As reported in *Railway Age* January 10, **E. A. Kuhn** has been named general superintendent motive power and machinery at Richmond, Va., with general supervision over all locomotive and car matters for the system.

tréal, has been appointed assistant comptroller. **Fred A. Rutherford**, tax commissioner at Montreal, succeeds Mr. Reid as general auditor.

Ronald Graham has been named superintendent of sleeping and dining cars at Calgary, Alta., succeeding the late **Owen Gleason**. Mr. Graham has been acting superintendent at Calgary since last fall.

J. L. Hall and **L. R. Smith** have been appointed superintendents, Calgary division, at Calgary, Alta., and Medicine Hat division, at Medicine Hat, Alta., respectively. **A. M. Fraser**, superintendent of the Lethbridge (Alta.) division, has been named general superintendent at Moose Jaw, Sask., succeeding **J. W. Wilkes**, who retired February 1. **C. C. Young**, assistant superintendent of the Portage division at Winnipeg, has been promoted to superintendent at Moose Jaw, succeeding **K. R. Perry**, who replaces



C. C. Young

Mr. Fraser at Lethbridge. **J. L. Farrer**, assistant general yardmaster at Fort William, Ont., has been promoted to assistant superintendent at Winnipeg, succeeding Mr. Young.

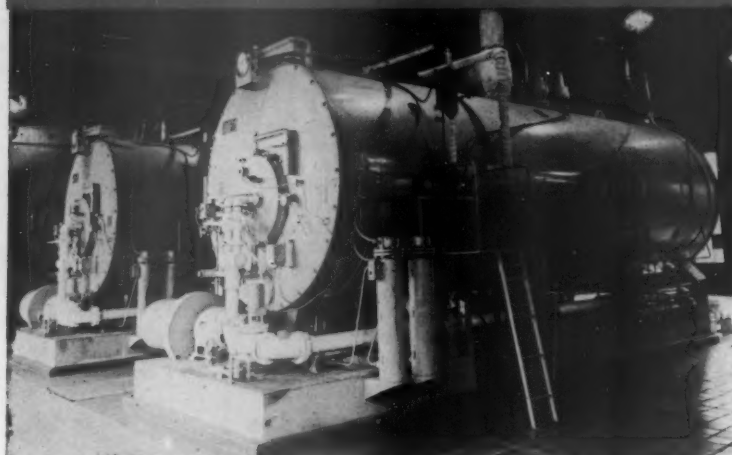
G. Meredith Rountree, assistant chief clerk in the office of comptroller at Montreal, has been appointed assistant to vice-president.

DENVER & RIO GRANDE WESTERN.—**A. A. Bolton** has been appointed assistant western traffic manager at San Francisco. The position of assistant freight traffic manager—perishable at San Francisco, formerly held by Mr. Bolton, has been discontinued.

A. C. Dick, general agent at Cincinnati, has been appointed assistant traffic manager at New York, succeeding **V. A. Farrell**, who has been relieved of the responsibilities of that position due to prolonged illness. **C. M. Wildt** has been named general agent at Cincinnati, replacing Mr. Dick.

EASTERN RAILROADS PRESIDENTS CONFERENCE.—**Walter S. Jensen**, manager of the Railroad Perishable Inspection Agency at New York, retired February 4 because of ill health. **George E. Marvin**, assistant manager, succeeds Mr. Jensen and

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27

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has been replaced by **Donald R. Bennett**, district inspector of the New York Metropolitan district.

ERIE.—**Edwin N. Hambly**, assistant freight traffic manager at New York, retired January 31 after 48 years of service. **George W. Krom**, general agent, passenger department, at Jersey City, N. J., has been promoted to assistant general passenger agent at Rockefeller Center, New York, succeeding **J. H. Dimke**, deceased. **Henry Herrmann**, milk traffic agent, succeeds Mr. Krom as general agent, passenger department, Jersey City.

FRISCO.—**C. A. McLeod** has been appointed assistant superintendent, Rolla subdivision, at Newburg, Mo.

MILWAUKEE.—**Steven E. Pilson**, district passenger agent at LaCrosse, Wis., has been appointed general agent—passenger department at Chicago, succeeding **Victor L. Hitzfeld**, whose retirement was noted in *Railway Age* January 10. **Edward A. Freund**, city passenger agent at Milwaukee, replaces Mr. Pilson. **Roland C. Sanders**, general freight agent—rates and divisions at Seattle, retires January 31 after 49 years of service. Mr. Sanders' successor is **H. O. Enggel**, assistant general freight agent, who in turn is replaced by **Anton R. Villata**, chief clerk.

W. M. Freund, trainmaster at Savanna, Ill., has exchanged positions with **R. C. Lewin**, trainmaster at Bensenville, Ill. **Robert J. Dimmitt**, traveling engineer and trainmaster at Mitchell, S.D., has been named assistant superintendent, Iowa and Dakota division, at the same point.

NEW YORK CENTRAL.—**H. A. Scott**, assistant chief signal engineer at Cleveland, has been appointed acting chief signal engineer there, succeeding **J. J. Corcoran**, whose retirement was noted in *Railway Age* January 24. **L. S. Bottinelli**, chief signal inspector—system, at Cleveland, succeeds Mr. Scott and has been replaced by **C. T. Evans**.

Neil R. McCormick, assistant general freight agent at Buffalo, N.Y., has been appointed assistant general freight agent at New York, succeeding **Wallace M. Snow**, whose appointment as freight traffic manager at Boston was noted in *Railway Age* January 3. **Stanley A. R. Laneto**, New England freight agent at Boston, succeeds Mr. McCormick as assistant general freight agent at Buffalo and has been succeeded by **Richard M. Cornell**, general agent, freight traffic department, at Washington. **Edward H. Churchill** replaces Mr. Cornell.

F. H. Dugan, trainmaster on the Boston & Albany at West Springfield, Mass., has been transferred to Beacon Park, Mass., succeeding **C. E. Bell**, who has been named trainmaster of the Pennsylvania division of the NYC at Clearfield, Pa. Mr. Bell replaces **E. P. Brown**, who has been transferred to Jersey Shore, Pa., to succeed

R. K. Ort, retired. **E. C. Cross** has been appointed assistant to general manager—labor relations of the B&A at Boston, succeeding **F. W. Scully**, who has been named trainmaster at West Springfield.

J. W. Steck, superintendent of shops at Avis, Pa., retired January 31, after 35 years of service. He has been succeeded by **T. C. Smith**, steel shop foreman.

ROCK ISLAND.—**Fred E. Exley** has been appointed managing editor of the employee magazine, recently renamed *The Rocket*, with headquarters at Chicago. He also will serve as public relations representative.

W. B. Kawa has been appointed assistant purchasing agent at Chicago, succeeding **G. L. Tresch**, who has retired after 44 years of service in the purchasing department.

SEABOARD.—**H. G. Walker**, assistant freight traffic manager, has been appointed assistant to vice-president, with headquarters as before at Norfolk, Va., succeeding **W. J. Hock**, promoted. **J. P. Roberts**, perishable diversion agent at Savannah, succeeds Mr. Walker as assistant freight traffic manager at Norfolk. **J. F. Williams** has been appointed assistant general freight agent at Richmond, Va., succeeding **E. N. Quayle**, who has been promoted to assistant freight traffic manager at Norfolk, in charge of solicitation in the North and West. **L. W. Fincher**, district freight agent, has been named assistant general freight agent at Atlanta. **G. C. Tate**, general agent, has been appointed assistant general freight agent at Washington, D.C.

TEXAS & PACIFIC. — **W. C. Foster**, superintendent, Western division, at Big Spring, Tex., has been transferred to the Eastern division at Fort Worth, succeeding **W. T. Alexander**, resigned. **A. C. LaCroix**, assistant superintendent at Big Spring, replaces Mr. Foster, and has been succeeded by **R. H. Blassingame**, trainmaster at Mineola. **L. B. Griffin**, trainmaster at Marshall, Tex., has been transferred to Mineola, succeeding Mr. Blassingame. Mr. Griffin's successor is **R. G. Brill**, trainmaster, Louisiana division, at Alexandria, La., who in turn has been replaced by **C. S. Baldwin**, transportation inspector. **L. M. Hill** succeeds Mr. Baldwin.

WESTERN MARYLAND.—**R. M. Shilling** has been appointed general agent, freight traffic department, at Baltimore.

OBITUARY

George Stephen, 78, who retired in 1947 as vice-president in charge of traffic of the *Canadian Pacific*, died recently at Montreal.

Charles T. Jackson, 73, retired chief engineer of the *Milwaukee*, died February 4 at Columbia, Mo.

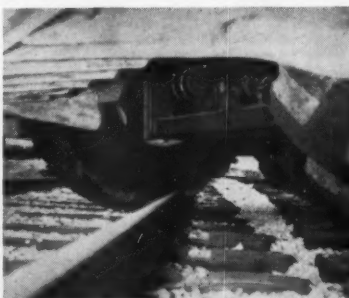
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Meetings and Conventions

The following list gives names and addresses of secretaries, and dates and places of next or regular meetings.

AIR BRAKE ASSOCIATION.—Lawrence Wilcox, Room 827, 80 E. Jackson Blvd., Chicago 4. Annual meeting September 12-14, 1955, Hotel Sherman, Chicago.

ALLIED RAILWAY SUPPLY ASSOCIATION.—C. F. Weil, P. O. Box 5522, Chicago 80. Exhibit in conjunction with Coordinated Mechanical Associations meeting, September 12-14, 1955, Hotel Sherman, Chicago.

AMERICAN ASSOCIATION OF BAGGAGE TRAFFIC MANAGERS.—T. R. Stanton, 1430 Railway Exchange Bldg., St. Louis 1. Annual meeting, June 27-29, 1955, Lake Placid Club, Lake Placid, N. Y.

AMERICAN ASSOCIATION OF PASSENGER RATE MEN.—William Bins, 1115 Railway Exchange, Chicago 4.

AMERICAN ASSOCIATION OF PASSENGER TRAFFIC OFFICERS.—B. D. Branch, Eastern Time Table Distributing Company, Liberty Street Terminal, New York 6.

AMERICAN ASSOCIATION OF RAILROAD SUPERINTENDENTS.—Miss Elise La Chance, Room 901, 431 S. Dearborn St., Chicago 5. Annual meeting, June 7-9, 1955, Hotel La Salle, Chicago.

AMERICAN ASSOCIATION OF TRAVELING PASSENGER AGENTS.—C. A. Melin, P. O. Box 5025, Cleveland 1.

AMERICAN COUNCIL OF RAILROAD WOMEN.—Amy Mitchell, Atlanta & West Point, Atlanta 3.

AMERICAN RAILWAY BRIDGE AND BUILDING ASSOCIATION.—Miss Elise La Chance, Room 901, 431 S. Dearborn St., Chicago 5. Annual meeting, September 19-21, 1955, Conrad Hilton Hotel, Chicago.

AMERICAN RAILWAY CAR INSTITUTE.—W. A. Renz, 19 E. 47th St., New York 17.

AMERICAN RAILWAY DEVELOPMENT ASSOCIATION.—E. E. Exon, New York Central, 230 E. Ninth St., Cincinnati 2. Annual Meeting, March, 1955, White Sulphur Springs, W. Va.

AMERICAN RAILWAY ENGINEERING ASSOCIATION.—Works in cooperation with the Association of American Railroads, Engineering Division.—Neal D. Howard, 59 E. Van Buren St., Chicago 5. Annual meeting, March 15-17, 1955, Palmer House, Chicago.

AMERICAN RAILWAY MAGAZINE EDITORS ASSOCIATION.—C. P. McCallum, New York, New Haven & Hartford, Room 2050, Grand Central Terminal, New York. Spring Meeting, May 13, 1955, Baltimore. Annual meeting September 28-30, 1955, Broadmoor Hotel, Colorado Springs, Colo.

AMERICAN SHORT LINE RAILROAD ASSOCIATION.—C. E. Huntley, 2000 Massachusetts Ave., N. W., Washington 6, D. C.

AMERICAN SOCIETY FOR TESTING MATERIALS.—R. J. Painter, 1916 Race St., Philadelphia 3. Annual meeting, June 26-July 1, 1955, Chalfonte-Haddon Hall, Atlantic City.

AMERICAN SOCIETY OF MECHANICAL ENGINEERS.—C. E. Davies, 29 W. 39th St., New York 18.

RAILROAD DIVISION.—E. L. Woodward, Railway Locomotives and Cars, 79 W. Monroe St., Chicago 3.

AMERICAN WOOD-PRESERVER'S ASSOCIATION.—W. A. Penrose, 839 Seventeenth St., N. W., Washington 6, D. C. Annual meeting, April 13-15, 1953, Jefferson Hotel, St. Louis.

ASSOCIATED TRAFFIC CLUBS OF AMERICA.—R. P. DeGroote, Luckenbach Steamship Co., Inc., 119 S. Dearborn St., Room 1107, Chicago 3. Annual meeting, September 18-21, 1955, Hotel Cleveland, Cleveland.

ASSOCIATION OF AMERICAN RAILROAD DINING CAR OFFICERS.—P. E. Griffith, 2028 Clark Ave., St. Louis 3. Annual meeting, October 11-13, 1955, Shoreham Hotel, Washington, D. C.

ASSOCIATION OF AMERICAN RAILROADS.—George M. Campbell, Transportation Bldg., Washington 6, D. C. Operations and Maintenance Department.—R. G. May, Vice-president, Transportation Bldg., Washington 6, D. C.

Operating-Transportation Division.—A. I. Ciliske, 59 E. Van Buren St., Chicago 5.

Operating Section.—H. S. Dewhurst, 59 E. Van Buren St., Chicago 5.

Transportation Section.—H. A. Eaton, 59 E. Van Buren St., Chicago 5.

Communications Section.—A. H. Grothmann, 59 E. Van Buren St., Chicago 5. Annual meeting, May 17-19, 1955, St. Francis Hotel, San Francisco.

Exhibits at St. Francis Drake Hotel.

Fire Protection and Insurance Section.—W. E. Todd, 59 E. Van Buren St., Chicago 5.

Freight Loss and Damage Prevention Section.—G. H. Ruhle, 59 E. Van Buren St., Chicago 5. Annual meeting, May 10-12, 1955, Cosmopolitan Hotel, Denver.

Freight Station Section.—W. E. Todd, 59 E. Van Buren St., Chicago 5.

Medical and Surgical Section.—H. S. Dewhurst, 59 E. Van Buren St., Chicago 5. Annual meeting, March 25-26, 1955, General Oglethorpe Hotel, Savannah.

Protective Section.—H. S. Dewhurst, 59 E. Van Buren St., Chicago 5. Annual meeting, May 18-20, 1955, Bellevue Stratford Hotel, Philadelphia.

Safety Section.—H. S. Dewhurst, 59 E. Van Buren St., Chicago 5. Annual meeting, June 7-9, 1955, Sheraton-Mt. Royal Hotel, Montreal.

Engineering Division.—E. G. Gehrke, 59 E. Van Buren St., Chicago 5.

Construction and Maintenance Section.—Neal D. Howard, 59 E. Van Buren St., Chicago 5. Annual meeting, March 15-17, 1955, Palmer House, Chicago.

Signal Section.—R. H. C. Balliet, 59 E. Van Buren St., Chicago 5. Annual meeting, October 11-13, 1955, Jung Hotel, New Orleans.

Mechanical Divisions.—Fred Peronto, 59 E. Van Buren St., Chicago 5. Annual meeting, June 21-23, 1955, Sheraton-Mt. Royal Hotel, Montreal.

Purchases and Stores Division.—John L. Timanus, Transportation Bldg., Washington 6, D. C. Annual meeting, May 16-18, 1955, Palmer House, Chicago.

Freight Claim Division.—R. E. O'Donnell, 59 E. Van Buren St., Chicago 5. Annual meeting, May 10 and 12, 1955, Cosmopolitan Hotel, Denver.

General Claims Division.—Bruce H. Smith, 59 E. Van Buren St., Chicago 5. Annual meeting, May 4-6, 1955, Sheraton Park Hotel, Washington, D. C.

Car Service Division.—Arthur H. Gass, Chairman, Transportation Bldg., Washington 6, D. C.

Finance, Accounting, Taxation and Valuation Department.—Arthur R. Seder, Vice-President, Transportation Bldg., Washington 6, D. C.

Accounting Division.—R. E. Keefe, Transportation Bldg., Washington 6, D. C. Annual meeting, June 27-30, 1955, Ambassador Hotel, Atlantic City.

Treasury Division.—R. E. Keefe, Transportation Bldg., Washington 6, D. C. Annual meeting, October 3-6, Roney Plaza, Miami Beach.

ASSOCIATION OF INTERSTATE COMMERCE COMMISSION PRACTITIONERS.—Miss Sarah F. McDonough, Executive Secretary, 2218 ICC Building, Washington 25, D. C. Annual meeting, May 5-6, 1955, Hotel Commodore, New York.

ASSOCIATION OF RAILROAD ADVERTISING MANAGERS.—A. W. Eckstein, Illinois Central, 135 E. Eleventh Pl., Chicago 5.

BRIDGE AND BUILDING SUPPLY ASSOCIATION.—L. R. Gurley, Modern Railroads, 201 N. Wells St., Chicago 6.

CANADIAN RAILWAY CLUB.—C. R. Fitt, P. O. Box 162, Montreal 3, Que. Regular meetings, second Monday of each month, except June, July and August. Sheraton-Mount Royal Hotel, Montreal, Que.

CAR DEPARTMENT ASSOCIATION OF ST. LOUIS.—E. S. Walsh, Terminal Railroad Association of St. Louis, St. Louis 3. Regular meetings fourth Tuesday of each month except June, July and August, Hotel DeSoto.

CAR DEPARTMENT OFFICERS' ASSOCIATION.—F. H. Strommel, 6536 Oxford Ave., Chicago 31. Annual meeting, September 12-14, 1955, Hotel Sherman, Chicago.

CAR FOREMEN'S ASSOCIATION OF CHICAGO.—W. R. McCain, Mather Stock Car Company, 326 N. Michigan Ave., Chicago 1. Regular meetings, second Monday of each month, except June, July and August, LaSalle Hotel.

CENTRAL RAILWAY CLUB OF BUFFALO.—J. B. O'Connor, 1817 Hotel Statler, Buffalo 5. Regular meetings,

second Thursday of each month except June, July and August, Hotel Statler.

CHICAGO RAILROAD DIESEL CLUB.—E. C. Fodick, 813 Sunnyside Ave., Chicago 40. Regular meetings first Thursday after first Sunday of each month except July and August, Hotel Sherman, 7:30 p.m.

CHICAGO RAILROADS CAR ACCOUNTING OFFICERS.—W. H. Soderlund (chairman) Chicago & Eastern Illinois, 66th & Union Avenue, Chicago 21. Regular meetings, last Wednesday of each month, except July and August, Congress Hotel, at 12:30.

EASTERN ASSOCIATION OF CAR SERVICE OFFICERS.—H. C. Rochester, Canadian National, 891 Notre Dame St., West, Montreal 3. Next meeting, May 5-6, 1955, Hotel Statler, Buffalo.

EASTERN CAR FOREMAN'S ASSOCIATION.—W. P. Dizard, 30 Church St., New York 7. Regular meetings, second Friday of January, February, March, April, May, October and November, 29 W. 39th St., New York.

LOCOMOTIVE MAINTENANCE OFFICERS' ASSOCIATION.—C. M. Lipscomb, 1721 Parker St., North Little Rock, Ark. Annual meeting, September 12-14, 1955, Hotel Sherman, Chicago.

MAINTENANCE OF WAY CLUB OF CHICAGO.—E. C. Patterson, 400 W. Madison St., Chicago 6. Regular meetings, October through April, Hamilton Hotel, Chicago.

MASTER BOILER MAKERS' ASSOCIATION.—A. F. Stiglmeier, 29 Parkwood St., Albany 8. Annual meeting, September 12-14, 1955, Hotel Sherman, Chicago.

METROPOLITAN MAINTENANCE OF WAY CLUB.—John S. Vreeland, Simmons-Boardman Publishing Corp., 30 Church St., New York 7. Meets in February, April, October and December. Next meeting, March 3, 1955, Railroad-Machinery Club, 30 Church St., New York, 6:30 p.m.

MILITARY RAILWAY SERVICE VETERANS.—F. W. Okie, Union R.R., Frick Bldg., P. O. Box 536, Pittsburgh. Annual meeting, September 16-18, 1955, Cincinnati.

MISSISSIPPI VALLEY MAINTENANCE OF WAY CLUB.—P. E. Odum, 1025 Frisco Building, 906 Olive St., St. Louis. Regular meetings, second Monday of each month September through May, DeSoto Hotel, St. Louis.

NATIONAL ASSOCIATION OF RAILROAD AND UTILITIES COMMISSIONERS.—R. Everette Kreeger, 7413 New Post Office Bldg., P. O. Box 684, Washington 4, D. C. Annual meeting, October 24-27, 1955, Asheville, N. C.

NATIONAL ASSOCIATION OF SHIPPERS' ADVISORY BOARD.—H. E. Bingham, Spencer Chemical Company, Dwight Bldg., Kansas City, Mo. Annual meeting, October 11-13, 1955, Pittsburgh.

NATIONAL DEFENSE TRANSPORTATION ASSOCIATION.—Mrs. Lois C. Gebrian, Suite 728, 1001 Connecticut Ave., Washington 6, D. C. Annual meeting, October 12-15, 1955, Boston.

NATIONAL INDUSTRIAL TRAFFIC LEAGUE.—L. J. Dorf, Suite 909, Sheraton Bldg., 711 14th St., Washington 5, D. C. Annual meeting, November 17-18, 1955, Chicago.

NATIONAL RAILWAY APPLIANCE ASSOCIATION.—J. B. Templeton, Templeton, Kenly & Co., 2545 Gardner Rd., Broadview, Ill. Lewis Thomas, Asst. Secy., 59 E. Van Buren St., Chicago 5, Exhibit in conjunction with AREA meeting, March 14-17, 1955, The Coliseum, Chicago.

NATIONAL SAFETY COUNCIL, RAILROAD SECTION.—C. T. DeWitt, Northern Pacific, St. Paul 1, Minn.

NEW ENGLAND RAILROAD CLUB.—William M. McCombs, 35 Lewis Wharf, Boston 10. Regular meetings, second Tuesday of each month, except May-September, incl. Hotel Vendome, Boston.

NEW YORK RAILROAD CLUB.—C. T. Stansfield, 30 Church St., New York 7. Regular meetings, third Thursday of each month except June, July, August, September and December. Century Room, Commodore Hotel. Reception, 6 p.m.; dinner, 7; meeting, 8:15.

NORTHWEST CARMEN'S ASSOCIATION.—N. J. Maglich, Minnesota Transfer Ry., 2071 University Ave., St. Paul 4, Minn. Regular meetings, first Monday of each month, except June, July, and August, Midway Club, 1931 University Ave., St. Paul.

NORTHWEST LOCOMOTIVE ASSOCIATION.—W. N. Cox, Northern Pacific, St. Paul 1, Minn. Regular meetings, third Monday of each month, except June, July and August, Midway Club, 1931 University Ave., St. Paul.

NORTHWEST MAINTENANCE OF WAY CLUB.—L. C. Blanchard, Milwaukee Passenger Depot, Minneapolis 1. Regular meetings, fourth Thursday of each month, September through April, inclusive, excepting November and December when it is third Thursday, Midway Club, 1931 University Ave., St. Paul.

PACIFIC RAILWAY CLUB.—S. E. Byler, 121 E. Sixth St., Los Angeles 14. Regular meetings, second Thursday of each alternate month at Palace Hotel, San Francisco, and Elks' Temple, Los Angeles.

RAILROAD PUBLIC RELATIONS ASSOCIATION.—J. Don Parel, Association of American Railroads, Transportation Bldg., Washington 6, D. C.

RAILWAY BUSINESS ASSOCIATION.—F. H. Middleton, 58 S. Dearborn St., Chicago 3.

RAILWAY CLUB OF PITTSBURGH.—C. E. Morrison, 2710 Koppers Bldg., Pittsburgh 19. Regular meetings third Thursday of each month, except June-September, incl., and December, Fort Pitt Hotel.

RAILWAY ELECTRIC SUPPLY MANUFACTURERS' ASSOCIATION.—L. R. Oswald, Thos. A. Edison, Inc., 1500 S. Western Ave., Chicago 8.

RAILWAY FUEL AND TRAVELING ENGINEERS' ASSOCIATION.—L. H. Peters, New York Central, Room 1213, 139 W. Van Buren St., Chicago 5. Annual meeting,

September 12-14, 1955, Hotel Sherman, Chicago.

RAILWAY SUPPLY MANUFACTURERS' ASSOCIATION.—A. W. Brown, 527 Lexington Ave., New York 17.

RAILWAY SYSTEMS AND PROCEDURES ASSOCIATION.—J. W. Milliken, Railway Age, 30 Church St., New York 7. Next meeting, April 12-14, 1955, Hotel Morrison, Chicago.

RAILWAY TELEGRAPH AND TELEPHONE APPLIANCE ASSOCIATION.—G. A. Nelson, Waterbury Battery Company, 30 Church St., New York 7. Meets with Communications Section of AAR.

RAILWAY TIE ASSOCIATION.—Roy M. Edmonds, 1221 Locust St., St. Louis 3. Annual meeting October 26-28, 1955, Peabody Hotel, Memphis.

ROADMASTERS AND MAINTENANCE OF WAY ASSOCIATION.—Miss Elise La Chance, Room 901, 431 S. Dearborn St., Chicago 5. Annual meeting September 19-21, 1955, Conrad Hilton Hotel, Chicago.

ST. LOUIS RAILROAD DIESEL CLUB.—F. C. Whitlock, Terminal Railroad Association of St. Louis, 376 Union Station, St. Louis 3. Regular meetings second Tuesday of each month, Hotel York. Dinner, 6:45 p.m.; meeting, 8.

SIGNAL APPLIANCE ASSOCIATION.—G. A. Nelson, Waterbury Battery Company, 30 Church St., New York 7. Meets with AAR Signal Section.

SOUTHEASTERN RAILWAY DIESEL CLUB.—H. W. Brewer, Seaboard Air Line, P. O. Box 1654, Norfolk, Va. Regular meetings, second Tuesday in February, April, June, August, October and December, 9:30 a.m., Mayflower Hotel, Jacksonville.

SOUTHERN AND SOUTHWESTERN RAILWAY CLUB.—A. T. Miller, 4 Hunter St., S. E. Atlanta. Regular meetings, third Thursday in January, March, May, and November, at Atlanta.

SOUTHERN ASSOCIATION OF CAR SERVICE OFFICERS.—F. I. Umhau, Southern Ry., Atlanta 3.

TORONTO RAILWAY CLUB.—H. W. Sosnerville, P. O. Box 8, Terminal "A," Toronto 1, Ont. Regular meetings, fourth Monday of each month, except February, June, July, August and December, Royal York Hotel.

TRACK SUPPLY ASSOCIATION.—Lewis Thomas, Q and C Company, 59 E. Van Buren St., Chicago 5.

WESTERN ASSOCIATION OF RAILWAY TAX COMMISSIONERS.—L. R. Norberg, 516 W. Jackson Blvd., Chicago 6. Regular meetings, 12:15 p.m., first Wednesday of each month, except July and August, Traffic Club, Palmer House, Chicago.

WESTERN RAILWAY CLUB.—E. E. Thulin, Suite 339, Hotel Sherman, Chicago 1. Regular meetings: February 21, March 21, April 25, May 16, 1955.



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